This Issue Exceeds 130,000 Copies

THE JOURNAL

OF THE

American Medical Association

Subscription, $12.00 | Published Weekly at | *Single Copy, 35 Cents*
VOLUME 143, No. 12 | 535 North Dearborn Street, Chicago 10, Illinois | JULY 22, 1950

Original Articles

FUNGOUS DISEASES OF THE LUNGS 1041
H. E. Bost, M.D., New York

MENTAL CHANGES IN CHRONICALLY ANOXEMIC PATIENTS DURING OXYGEN THERAPY 1044
J. H. Comroe Jr., M.D.; E. R. Bohnson, M.D., and E. O. Coates Jr., M.D., Philadelphia

BCG 1048
Robert J. Anderson, M.D., and Carroll E. Palmer, M.D., Washington, D. C.

DIGITOXIN CAUSING VENTRICULAR TACHYCARDIA WITH PERIPHERAL VASCULAR COLLAPSE 1052
Rudolph E. Fromont, M.D., and Herbert King, M.D., Staten Island, N. Y.

PROPHYLAXIS OF PENILE CARCINOMA 1054
Alan R. Bleich, M.D., New York

HYPOCOAGULABILITY OF IRRADIATED PLASMAS 1057
Seymour S. Cutler, M.D.; Benjamin Burbank, M.D., and Eugene R. Marzulla, M.D., Brooklyn

Special Article

MULTIPLE SCLEROSIS 1059
George A. Schumacher, M.D., New York

Clinical Notes

NEONATAL SICKLE CELL ANEMIA 1065
Claude Albee Frazier, M.D., New York, and Clarence E. Rice, M.D., Huntington, W. Va.

TREATMENT OF ACTINOMYCOSIS WITH AUREOMYCIN 1067
Leon V. McVay Jr., M. D.; David Dunavant, M.D., Frances Guthrie and Douglas H. Sprunt, M.D., Memphis, Tenn.

Council Reports

Council on Pharmacy and Chemistry
New and Nonofficial Remedies 1068
Council on Physical Medicine and Rehabilitation 1069

Editorials and Comments

Physicians for the Armed Forces 1070
Uranium and Fluorine 1070
Proteins 1071
Survey of Blood Banks 1072
Foreign Medical Schools 1072
Radiation Bacteremia 1072

Organization Section

Proceedings of the San Francisco Session 1073

Washington News

Medical Legislation 1103

Regular Departments

Medical News 1105
Marriages 1107
Deaths 1108
Foreign Letters
Italy 1110
Paris 1110
Sweden 1111
Turkey 1112
Brazil 1113
Correspondence 1113
Council on Medical Education and Hospitals 1114
Medical Examinations and Licensure 1114
Current Medical Literature 1115
Book Notices 1123
Queries and Minor Notes 1126
Tonics and Sedatives ..... Adv. Page 30
Books Received ..... Adv. Page 50

Psychiatry and the General Practitioner

Today the spotlight is on psychiatry—and by recognition of the early signs and symptoms of depression, schizophrenia and organic diseases of the brain, the general practitioner is often able to save both the patient and his family from tragic experiences. Since he sees these patients first, long before they reach the psychiatrist, it behooves the general practitioner to have a sound knowledge of the fundamentals of psychiatric practice.

You'll find immediately usable help on your psychiatric problems in the July Number of *The Medical Clinics of North America*. It contains a 13-clinic Symposium on *Psychiatry and The General Practitioner* which comes to you direct from The Mayo Clinic. The psychiatric and psychosomatic aspects of dealing with women patients, children, and the older age groups are among the many points discussed. Also included in this July Number are 8 beautifully illustrated clinics on Amyloidosis and 5 other clinics on important subjects. Turn to page 3 for the complete contents of this number.

This is typical of the practical postgraduate teaching you get every other month by subscribing to "The Medical Clinics." The Cumulative Index plan (year's index in each number and Three-Year Cumulative Index in the November Number of each year) makes these books a permanent reference as well as a mirror of "the new things in medicine while they are still new." Make sure *you* are enrolled in this postgraduate course!

See also SAUNDERS Advertisement on pages 2 and 3

BIBLE INST OF L A
LIBRARY
558 S HOPE ST
LOS ANGELES 17 CALIF

New (6th) Edition

Curtis-Huffman's Textbook of Gynecology

No gynecologic problem is neglected or omitted in the *New (6th) Edition* of this respected work. And every technic and treatment is presented in the light of the most up-to-the-minute knowledge available.

You'll find here a natural progression from anatomy and physiology, through the general principles of examination, pathology and developmental considerations, to the practical diagnosis and treatment of specific gynecologic disorders. Step-by-step surgical technic is described and illustrated for all diseases and conditions where it may be indicated.

The common conditions encountered in any office practice are described in detail—gonorrhea, leukorrhea, dysmenorrhea, sterility, etc. Latest developments in antibiotic and hormone therapy are, of course, included.

The illustrative excellence of this book has brought praise from reviewers in all editions past—and there are many new drawings and photomicrographs in this *New (6th) Edition.* The illustrations are nearly all original and the drawings are principally by Tom Jones. 37 life-like color plates aid you in diagnosis.

By ARTHUR HALE CURTIS, M.D., Emeritus Professor of the Department of Obstetrics and Gynecology, Northwestern University Medical School; formerly Chief of Gynecological Service, Passavant Memorial Hospital; and JOHN WILLIAM HUFFMAN, M.D., Associate Professor of Obstetrics and Gynecology, Northwestern University Medical School; Attending Gynecologist, Passavant Memorial Hospital. 797 pages, 6½" x 9¼", with 466 illustrations, 37 in color. $10.00. *New (6th) Edition.*

THE CYTOLOGIC DIAGNOSIS OF CANCER

From the Vincent Memorial Hospital

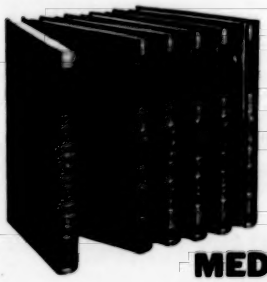
This unusual new book from The Vincent Memorial Hospital covers the remarkably accurate cytologic method of cancer diagnosis in an understandable manner. Published under the sponsorship of the American Cancer Society, it is based on the study of 10,000 cases, and covers vaginal smears, smears of sputum or bronchial aspiration, urine sediment, gastric secretion, and the sediment of serous fluid.

Use this book as a key to the laboratory reports you get on vaginal and other types of smears. It will help you tremendously in your interpretation because it actually describes and shows you (in 517 illustrations on 153 figures, with 30 plates in color) the type cells that are reported present, helps you decide what kind of tumor is indicated, and in what portion of the body it is most likely to be found. In unsuspected cases, particularly, the importance of such information cannot be overemphasized.

By the Staff of the Vincent Memorial Laboratory of the Vincent Memorial Hospital, a Gynecologic Service affiliated with Massachusetts General Hospital. Published under the sponsorship of the American Cancer Society. Foreword by JOE V. MEIGS, M.D., and MAURICE FREGONT-SMITH, M.D. 229 pages, 6½" x 9½", with 517 illustrations on 153 figures and 30 plates in color. $6.50 *New.*

Use Convenient Saunders Order Form on next page ▶

THE JOURNAL of the American Medical Association is published weekly by the American Medical Association. Subscription price, $12.00 a year, 35c a copy. Canadian $13.50. Foreign $14.00. Entered as second class matter June 29, 1905, at the Post Office at Chicago, Ill., under act of March 3, 1879. Address all communications to American Medical Association, 535 N. Dearborn St., Chicago 10, Illinois.



PSYCHIATRY and THE GENERAL PRACTITIONER

A Mayo Clinic Symposium in the July Number of the MEDICAL CLINICS OF NORTH AMERICA

Psychiatry—Psychosomatic Medicine and the General Practitioner—*by Dr. Francis J. Braceland*

Differentiation of Psychosis from Psychoneurosis—*by Dr. David A. Boyd, Jr.*

Doctors: Drugs: Patients—*by Dr. Howard P. Rome*

Psychosomatic Aspects of Pain—*by Drs. Irving S. Cooper and Francis J. Braceland*

Psychosomatic Aspects of Gynecology—*by Dr. Mary Giffin*

Correlation of the Dermatologic and Psychiatric Approach to the Treatment of Neurodermatitis—*by Drs. Robert R. Kierland and Maurice N. Walsh*

Holistic Treatment of Neurologic Disease—*by Dr. Joe R. Brown*

Psychiatric Aspects of Treatment for Intractable Pain in the Phantom Limb—*by Dr. Lawrence C. Kolb*

Indications for and Complications of Prefrontal Lobotomy—*by Drs. Ludwig M. Frank and Lawrence C. Kolb*

The Tyranny of Certain Terms—*by Dr. Maurice N. Walsh*

Psychologic Testing from the Standpoint of the General Practitioner—*by Drs. Josephine Ewert and Mary Giffin*

Some Common Diagnostic Problems in Children—*by Dr. Benjamin Spock*

The Practitioner and the Older Age Groups: Psychosomatic Aspects—*by Drs. David A. Boyd, Jr., and Francis J. Braceland*

The 13 Other Important Clinics You Get

Classification and General Aspects of Amyloidosis—*by Dr. David C. Dahlin*

Primary Systemic Amyloidosis with Symptoms and Signs of Liver Disease; Diagnosis by Liver Biopsy—*by Dr. Eric E. Wollaeger*

Primary Systemic Amyloidosis—*by Drs. Robert L. Parker, Howard M. Odel, Arch H. Logan, Jr., John R. Kelsey, Jr. and Jesse E. Edwards*

Amyloid Disease of the Heart—*by Drs. Albert J. Josselson, Raymond D. Pruitt and Jesse E. Edwards*

Amyloid Tumors of the Larynx and Trachea—*by Drs. David B. Stark and Gordon B. New*

Amyloidosis Complicating Myeloma—*by Drs. Edwin D. Bayrd and Warren A. Bennett*

Hepatic Manifestations in Secondary Amyloidosis—*by Dr. Maurice H. Stauffer*

Laboratory and Biopsy Diagnosis of Amyloidosis—*by Drs. David C. Dahlin, Maurice H. Stauffer and Frank D. Mann*

Coarctation of the Aorta with Hypotension in the Left Arm—*by Drs. Howard B. Burchell, Bowen E. Taylor, Julian R. B. Knutson and Khalil G. Wakim*

Pulmonary Stenosis Without Septal Defect Associated with Recurrent Ascites—*by Drs. Robert J. Boucek, Joseph E. Geraci and Edward H. Morgan*

The Treatment of Pernicious Anemia and Other Macrocytic Anemias with Vitamin B_{12}—*by Drs. Donald C. Campbell, Byron E. Hall and Edward H. Morgan*

Ethyl Carbamate (Urethane) in the Treatment of Chronic Myelocytic Leukemia—*by Drs. Talbert Cooper and Charles H. Watkins*

Splenectomy in Women of the Childbearing Age—*by Drs. Thomas W. McElin, Robert D. Mussey and Charles H. Watkins*

By Leading Internists. Issued serially, one number of about 300 pages, 6" x 9", illustrated, every other month. Sold only by a year of 6 consecutive numbers. Per year: Cloth Binding, $18.00; Paper Binding, $15.00.

ORDER FORM →

7-22-50

W. B. SAUNDERS COMPANY, West Washington Sq., Phila. 5

Send and charge to my account on your Easy Payment Plan.

☐ Subscription to Medical Clinics of North America 6 bimonthly numbers starting with July Number ☐ Cloth $18.00 ☐ Paper 15.00

☐ Curtis - Huffman's Gynecology 10.00

☐ Cytologic Diagnosis of Cancer 6.50

Name.....

Address.....

SPECIFIC METHODS OF TREATMENT— in the September (Boston) Number of the "Medical Clinics"

OXFORD UNIVERSITY PRESS *Publishers of Authoritative Books for over Four Centuries*

SAMUELS: MANAGEMENT OF PERIPHERAL ARTERIAL DISEASES

350 pages. 112 illustrations. 1950 $7.50
By Saul S. Samuels, A.M., M.D., Chief of the Dept. for Arterial Diseases, Stuyvesant Polyclinic Hospital.

This monograph, based on the first and second editions, of the author's former books is completely new, rewritten and up to date. It incorporates all of the latest developments to help prevent useless surgical amputations. It describes the author's methods of examination, treatment and operative approach when absolutely necessary. Chapters include diabetic gangrene and the various lesions encountered. Both the general practitioner and surgeon will find it of interest and value. "He is a good surgeon who can amputate a limb, but he is a better surgeon who can save a limb." Sir Astley Cooper.

THURBER: EVALUATION OF INDUSTRIAL DISABILITY

96 pages. 85 illustrations. 1950 $4.00
Prepared by joint committee of the California Medical Association and the Industrial Accident Commission of the State of California. Dr. Packard Thurber, Chairman.

This volume is the authorized official text for the evaluation of industrial disabilities and is intended to produce uniform reports based upon a standard procedure for measurement. It will be found of equal value for determining improvement in rehabilitation therapy.

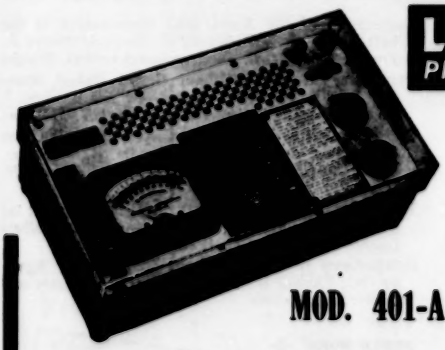
ROSENBAUM: CLINICAL ELECTROCARDIOGRAPHY

200 pages. 82 illustrations. 1950 $4.50
(Reprinted from Oxford Loose-Leaf Medicine)
By Francis F. Rosenbaum, M.D., Assistant Clinical Professor of Medicine, Marquette University School of Medicine.

This monograph dedicated to "Dr. Frank Norman Wilson whose work and teachings form the basis of this volume" presents in condensed, complete and easily understood form the present-day views of electrocardiography with interpretations of many illustrative electrocardiograms and discusses the role they play in clinical medicine. Along with Dr. Rosenbaum's own important contributions it fills the needs for both the general practitioner and cardiologist.

OXFORD UNIVERSITY PRESS · 114 FIFTH AVENUE · NEW YORK 11, N.Y.

V 19



LUMETRON *Clinical*
PHOTOELECTRIC COLORIMETER

MOD. 401-A

for 76 determinations

including

Albumin	Calcium	Phosphorus
Amino Acids	Globulin	Potassium
Amylase	Glucose	Protein
Bilirubin	Hemoglobin	Red Cell Count
Blood Volume	Hydrogen Ion (pH)	Salicylates
Bromide	Icteric Index	Sodium
Bromsulphalein	Iron	Sulfa Compounds
Calcium	Lactic Acid	Thiocyanate
Carbon Dioxide	Lead	Thymol Turbidity
Chloride	Magnesium	Urea Nitrogen
Cholesterol	N.P.N.	Uric Acid
Creatinine	Phenols	Urobilinogen
Creatine	P.S.P.	Vitamin A
Ethyl Alcohol	Phosphatase	Vitamin C

Equipment

Hammertone finished welded steel housing with white panel and Plexiglas cover, built-in stabilizer, sliding tube carrier, 4 matched glass tubes, 6 color filters, 140-page Reference Book for Clinical Tests; for operation from both 110 volt AC and 6-volt storage battery.

Literature

Write for descriptive Bulletin No. 406, also for free copy of 12-page Introduction to Clinical Photoelectric Colorimetry. 140-page Reference Book available separately, price $5.00.

With calibrations for 12 basic tests on 5 Calibration Cards including hemoglobin, glucose, urea, and N.P.N.; pre-calibrated for prompt delivery of calibrations for 44 additional tests at any time later on **$172.-**

With calibrations for 42 tests on 23 Calibration Cards pre-calibrated for prompt delivery of calibrations for 34 additional tests at any time later on **$192.-**

With calibrations for 56 tests on 34 Calibration Cards **$222.-**

Without calibrations for users intending to establish their own calibrations according to calibration procedures in Reference Book **$162.-**

PHOTOVOLT CORP. 95 MADISON AVENUE NEW YORK 16, N. Y.

Approach to the Abnormal through a Consideration of the Normal

Textbook of Abnormal Psychology

NEW FOURTH EDITION

By Roy M. Dorcus, *Professor of Psychology, University of California, and* **G. Wilson Shaffer,** *Dean of the University, Professor of Psychology, Johns Hopkins University.*

An *understanding* of abnormal psychology comes about most naturally through an inspection of the normal. This approach is ideal for students—or for anyone who wants to learn the basic facts of psychology. Careful organization of material, simple, clearly-worded explanations and detailed case reports guide you easily through a vast amount of information. By this means you will develop an understanding of your patients, your associates, yourself and your own efforts to adjust happily to your environment. The major theories in use today are all adequately explained, but no effort is made to force your choice toward one over the other, the recommended therapy for each case being based on its own particular needs.

Features of this extensively revised fourth edition include three new chapters—Brain Damage Disorders, Psychosomatic Disorders, and Classification and History of Mental Diseases—a complete rewriting of the psychotherapy section, some 250 new references, a glossary of terms, incorporation throughout of the results of recent research, some rearrangement of material, plus everything that made the first three editions so valuable and so popular.

625 pp., 38 figs., 4 plates, probable price $5.00

Will Steroid Balance Solve the Riddle of Cancer?

STEROID HORMONES AND TUMORS

Tumorigenic and Anti-tumorigenic Actions of Steroid Hormones and the Steroid Homeostasis

By Alexander Lipschutz, M.D., Director of the Department of Experimental Medicine, National Health Service of Chile

Steroid hormones can interfere in the dynamics of cancer in the body. Estrogen can induce atypical growth. Dr. Lipschutz's study of these processes led to the concept of an antitumoral autodefense in the body by the maintenance of a steroid balance. Read this fascinating chapter of modern tumor research for thorough, up to the minute information on this aspect of the great cancer problem.

320 pp., 111 figs. in 8½ plates, $6.00

Serology Means More than a "Syphilis Test" Now

SEROLOGY WITH LIPID ANTIGENS

By Reuben L. Kahn, D.Sc., Chief of Serology Laboratory and of Serologic Consultation Service, University of Michigan Hospital

Twenty-five years ago the author reported the Kahn test in his *Serology in Syphilis Control.* Recent studies on the universal serologic reaction with lipid antigens have made it apparent that "serology of syphilis" is only a part of the whole field of "serology with lipid antigens." In this new book, all aspects of universal reactions are discussed, with emphasis on the Kahn procedures. The nature of positive serologic reactions, both in the presence and in the absence of syphilis, is reviewed in the light of the author's many years of practical experience.

225 pp., 27 charts, 68 tables, $6.00

THE WILLIAMS & WILKINS COMPANY

Mt. Royal and Guilford Aves. Baltimore 2, Maryland

Please send

Dorcus and Shaffer	$5.00
Lipschutz	6.00
Kahn	0.00

NAME.....

ADDRESS.....

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1949-1950

President—Elmer L. Henderson, Louisville, Ky.
President-Elect—John W. Cline, San Francisco.
Vice-President—R. H. Robins, Camden, Ark.
Secretary and General Manager—George F. Lull, Chicago.
Asst. Secretary—Ernest B. Howard, Chicago.
Treasurer—J. J. Moore, Chicago.
Speaker, House of Delegates—F. F. Borzell, Philadelphia.
Vice Speaker, House of Delegates—James R. Reuling, Bayside, N. Y.
Editor—Austin Smith, Chicago.
Business Manager—Thomas R. Gardiner, Chicago.
Board of Trustees—Walter B. Martin, Norfolk, Va., 1951; Dwight H. Murray, Napa, Calif., 1952; E. J. McCormick, Toledo, Ohio, 1952; Edwin S. Hamilton, Kaukakee, Ill., 1953; Gunnar Gundersen, LaCrosse, Wis., 1953; Louis H. Bauer, Chairman, Hempstead, N. Y., 1954; F. J. L. Blasingame, Wharton, Texas, 1954; L. W. Larson, Bismarck, N. D., 1955; Thomas P. Murdock, Meriden, Conn., 1955.
Judicial Council—Walter F. Donaldson, Pittsburgh, 1951; R. L. Pearson Jr., Miami, Fla., 1952; J. R. Lukins, Louisville, Ky., 1953; Edward R. Cunniffe, Chairman, New York, 1954; Louis A. Buie, Rochester, Minn., 1955; George F. Lull, Chicago, Secretary.
Council on Medical Education and Hospitals—W. S. Middleton, Madison, Wis., 1951; H. G. Weiskotten, Chairman, Syracuse, N. Y., 1952; Victor Johnson, Rochester, Minn., 1953; W. L. Prevelly, Doe West, S. C., 1954; Harvey B. Stone, Baltimore, 1955; Guy A. Caldwell, New Orleans, 1954; Russell L. Haden, Comet, Va., 1957; Donald G. Anderson, Secretary, Chicago.
Council on Scientific Assembly—Stanley P. Reimann, Philadelphia, 1952; Alphonse McMahon, St. Louis, 1953; Charles H. Phifer, Chicago, 1954; Carl A. Lincke, Carrollton, Ohio, 1955; Michael E. DeBakey, Houston, Texas, 1956; Henry R. Viets, Chairman, Boston, 1957; and ex officio the President-Elect, the Editor and the Secretary of the Association.
Council on Medical Service—H. B. Mulholland, Charlottesville, Va., 1951; Joseph D. McCarthy, Omaha, 1951; Elmer Hess, Erie, Pa., 1952; Thomas A. McGoldrick, Brooklyn, 1952; Jesse D. Haser, Phoenix, Ariz., 1953; James R. McVay, Chairman, Kansas City, Mo., 1953; Ernest E. Irons, Chicago; E. L. Henderson, Louisville, Ky.; F. J. L. Blasingame, Wharton, Texas; George F. Lull, Chicago; Thomas A. Hendricks, Secretary, Chicago.
Council on Pharmacy and Chemistry (Standing Committee of Board of Trustees)—Torald Sollmann, Chairman, Cleveland, 1951; Isaac Starr, Philadelphia, 1951; Joseph Hayman, Cleveland, 1951; E. M. K. Geiling, Chicago, 1952; S. W. Clausen, Rochester, N. Y., 1952; Paul R. Cannon, Chicago, 1952; W. C. Cutting, San Francisco, 1953; Joseph Stokes Jr., Philadelphia, 1953; C. Guy Lane, Boston, 1953; Carl A. Dragstedt, Chicago, 1953; James P. Leake, Washington, D. C., 1954; George W. Thorn, Boston, 1954; Henry K. Beecher, Boston, 1954; M. Fishbein, Chicago, 1955; G. W. McCoy, New Orleans, 1955; P. H. Long, Baltimore, 1955; E. M. Nelson, Washington, D. C., 1955; Robert T. Stormont, Secretary, Chicago.
Council on Physical Medicine and Rehabilitation (Standing Committee of Board of Trustees)—W. E. Garrey, Nashville, Tenn., 1951; W. W. Cubbins, Washington, D. C., 1951; W. J. Zeiler, Cleveland, 1951; Derrick Vail, Chicago, 1951; W. E. Grove, Milwaukee, 1951; A. C. Ivy, Chicago, 1952; Frank R. Ober, Boston, 1952; Frank D. Dickson, Kansas City, Mo., 1952; Howard A. Rusk, New York, 1953; Frank H. Krusen, Chairman, Rochester, Minn., 1953; Shields Warren, Boston, 1953; Anthony C. Cipollaro, New York, 1954; M. A. Bowie, Swarthmore, Pa., 1954; G. M. Piersol, Philadelphia, 1954; Howard A. Carter, Secretary, Chicago.
Council on Foods and Nutrition (Standing Committee of Board of Trustees)—R. M. Wilder, Rochester, Minn., 1951; Howard B. Lewis, Ann Arbor, Mich., 1951; J. S. McLester, Chairman, Birmingham, Ala., 1951; Philip C. Jeans, Iowa City, 1952; C. A. Elvehjem, Madison, Wis., 1952; William J. Darby, Nashville, Tenn., 1953; George R. Cowgill, New Haven, Conn., 1953; C. S. Ladd, Washington, D. C., 1954; John B. Youmans, Chicago, 1954; Charles S. Davidson, Boston, 1955; James R. Wilson, Secretary, Chicago.
Council on Industrial Health (Standing Committee of Board of Trustees)—L. D. Bristol, Harrisburg, Pa., 1951; Paul D. Magnuson, Washington, D. C., 1951; Robert A. Kehoe, Cincinnati, 1951; Harold A. Vonachen, Peoria, Ill., 1952; W. A. Sawyer, Rochester, N. Y., 1952; James S. Simmons, Boston, 1953; Rutherford V. Johnstone, Los Angeles, 1953; A. J. Lanza, Chairman, New York, 1953; C. D. Selby, Detroit, 1953; Warren F. Draper, Washington, D. C., 1954; O. A. Sander, Milwaukee, 1954; Dexter H. Bissell, St. Paul, 1954; E. J. McCormick, Toledo, Ohio, ex officio; C. M. Peterson, Secretary, Chicago.
Council on National Emergency Medical Service (Standing Committee of Board of Trustees)—Harold S. Diehl, Minneapolis, 1950; Perrin H. Long, Baltimore, 1950; Harold C. Lueth, Omaha, 1951; James C. Sargent, Chairman, Milwaukee, 1952; Stafford Warren, Los Angeles, 1953; Herbert B. Wright, Cleveland, 1954; and ex officio and the President-Elect and the Secretary of the Association; M. Hall, Chicago, Secretary.
Committee on Scientific Exhibit—E. J. McCormick, Chairman, Toledo, Ohio; L. W. Larson, Bismarck, N. D.; Thomas P. Murdock, Meriden, Conn.; Thomas G. Hull, Director, Chicago; Advisory Committee—Howard F. Root, Boston; Paul J. Hanzlik, San Francisco; Ludwig Hektoen, Chicago; Urban Maes, New Orleans; H. J. Corper, Denver, Colo.; James P. Leake, Washington, D. C.

OFFICERS OF SECTIONS, 1950-1951

Anesthesiology—Chairman, H. Boyd Stewart, Tulsa, Okla.; Secretary, John S. Lundy, 102 Second Ave., S.W., Rochester, Minn.

Dermatology and Syphilology—Chairman, Dudley C. Smith, Charlottesville, Va.; Secretary, John H. Lamb, 117 N. Broadway, Oklahoma City 2.

Diseases of the Chest—Chairman, Alvin E. Greer, Houston, Texas; Secretary, Jay A. Myers, 91 S. Seventh St., Minneapolis 2.

Experimental Medicine and Therapeutics—Chairman, James A. Greene, Houston, Texas; Secretary, Hugh A. Butt, Mayo Clinic, Rochester, Minn.

Gastro-Enterology and Proctology—Chairman, Frank G. Bunyeon, Reading, Pa.; Secretary, Donovan C. Browne, 2636 St. Charles Ave., New Orleans.

General Practice—Chairman, Lester D. Bibler, Indianapolis; Secretary, Thomas E. Robinson, 1088 E. 21st South St., Salt Lake City.

Internal Medicine—Chairman, Walter L. Palmer, Chicago; Secretary, Herman L. Blumgart, 330 Brookline Ave., Boston 15.

Laryngology, Otology and Rhinology—Chairman, J. Milton Robb, Detroit; Secretary, Sam Houston Sanders, 1040 Madison Ave., Memphis 3, Tenn.

Nervous and Mental Diseases—Chairman, Louis J. Karnosh, Cleveland; Secretary, Francis M. Forster, 2900 Reservoir Road N.W., Washington 7, D. C.

Obstetrics and Gynecology—Chairman, Arthur B. Hunt, Rochester, Minn.; Secretary, Bernard J. Hanby, 1930 Wilshire Blvd., Los Angeles 5.

Ophthalmology—Chairman, Robert J. Masters, Indianapolis; Secretary, Trygve Gundersen, 101 Bay State Road, Boston 15.

Orthopedic Surgery—Chairman, Walter P. Blount, Milwaukee; Secretary, Charles S. Peace, 104 S. Michigan Blvd., Chicago.

Pathology and Physical Medicine—Chairman, Stanley P. Reimann, Philadelphia; Secretary, Edwin F. Hirsch, 1439 S. Michigan Blvd., Chicago.

Pediatrics—Chairman, Joseph B. Bilderback, Portland, Ore.; Secretary, Wyman C. C. Cole, 2001 W. Grand Blvd., Detroit 2.

Physical Medicine and Rehabilitation—Chairman, George Morris Piersol, Philadelphia; Secretary, Walter J. Zeiler, 2020 E. 93d St., Cleveland.

Preventive and Industrial Medicine and Public Health—Chairman, Rutherford T. Johnstone, Los Angeles; Secretary, Jean S. Felton, Oak Ridge National Laboratory, Oak Ridge, Tenn.

Radiology—Chairman, J. C. Dickinson, Tampa, Fla.; Secretary, Paul C. Hodges, 950 E. 59th St., Chicago.

Surgery, General and Abdominal—Chairman, I. S. Ravdin, Philadelphia; Secretary, I. Ridgeway Trimble, 8 W. Madison St., Baltimore.

Urology—Chairman, John A. Taylor, New York; Secretary, Earl E. Ewert, 605 Commonwealth Ave., Boston 15.

for Quick Action!

in the Respiratory and Circulatory Emergencies of Intravenous Barbiturate Anesthesia.

inject

COUNCIL ACCEPTED **Metrazol**

intravenously, intramuscularly, subcutaneously

In respiratory and other emergencies resulting from medullary depression during anesthesia. Ampules 1 and 3 cc., tablets, solution, powder.

Metrazol, brand of pentamethylenetetrazol, Trade Mark Reg. U. S. Pat. Off., E. Bilhuber, Inc., Mfr.

Bilhuber-Knoll Corp. Orange, N. J.

V 19

A "most valuable drug in an acute paroxysm."[1]

In bronchial asthma Rehfuss and associates[1] suggest that treatment with Aminophyllin be given intravenously: 0.24 to 0.48 Gm. (3¾ to 7½ grains) slowly. They state: "More complete relaxation results from 0.48 Gm. dosage. The drug may be mixed with 15 to 20 c.c. of 50 per cent glucose."

Searle Aminophyllin is a valuable therapeutic agent and also a diuretic and myocardial stimulant for relief of pulmonary edema or paroxysmal dyspnea of congestive heart failure and for control of Cheyne-Stokes respiration.

1. Rehfuss, M. E.; Albrecht, F. K., and Price, A. H.: A Course in Practical Therapeutics, Baltimore, The Williams & Wilkins Company, 1948, p. 446.

Searle AMINOPHYLLIN*

Oral...
Parenteral...
Rectal Dosage Forms

SEARLE RESEARCH IN THE SERVICE OF MEDICINE

*Contains at least 80% anhydrous theophylline.

the new
VOLUME 3

ANOTHER AMA BOOK

QUESTIONS AND ANSWERS

Comprising 517 pages of selected Queries and Minor Notes published in THE JOURNAL from 1943 to 1949.

The various chapters are

1. Air Conditioning and Sanitation
2. Alcohol and Alcoholism
3. Anesthetics, Opiates and Drug Addiction
4. Arthritis and Rheumatism
5. Blood Tests and Blood Diseases
6. Blood Transfusion
7. Burns
8. Cancer
9. Cardiovascular System
10. The Common Cold
11. Diabetes and Carbohydrate Metabolism
12. Drugs and Drug Poisoning
13. Eye Diseases and Vision Tests
14. Female Organs, Menstruation and Menopause
15. Diseases of Gastrointestinal Tract
16. Diseases of Genitourinary Tract
17. Hair and Nails
18. Hay Fever, Asthma and Allergy
19. Hearing
20. Heredity
21. Industrial Poisons and Poisoning
22. Infancy and Childhood
23. Certain Infectious Diseases
24. Insect Bites
25. Liver and Biliary Tract
26. Metabolism; Obesity; Vitamins
27. Mouth and Teeth
28. Musculoskeletal System
29. Nervous System
30. Nose, Sinuses and Tonsils
31. Physiology
32. Pregnancy; Labor; Abortion
33. Sex Problems—Fertility—Sterility
34. Skin Conditions
35. Tobacco and Smoking
36. Tropical and Parasitic Diseases
37. Tuberculosis
38. Undulant Fever
39. Venereal Diseases
40. Virus Diseases
41. X-Ray, Radium and Physical Therapy
42. Miscellaneous

MAIL THIS COUPON NOW

AMERICAN MEDICAL ASSOCIATION
535 NORTH DEARBORN, CHICAGO 10, ILLINOIS

Send me a copy of the new *Questions & Answers*, Volume 3. I enclose remittance of $3.00.

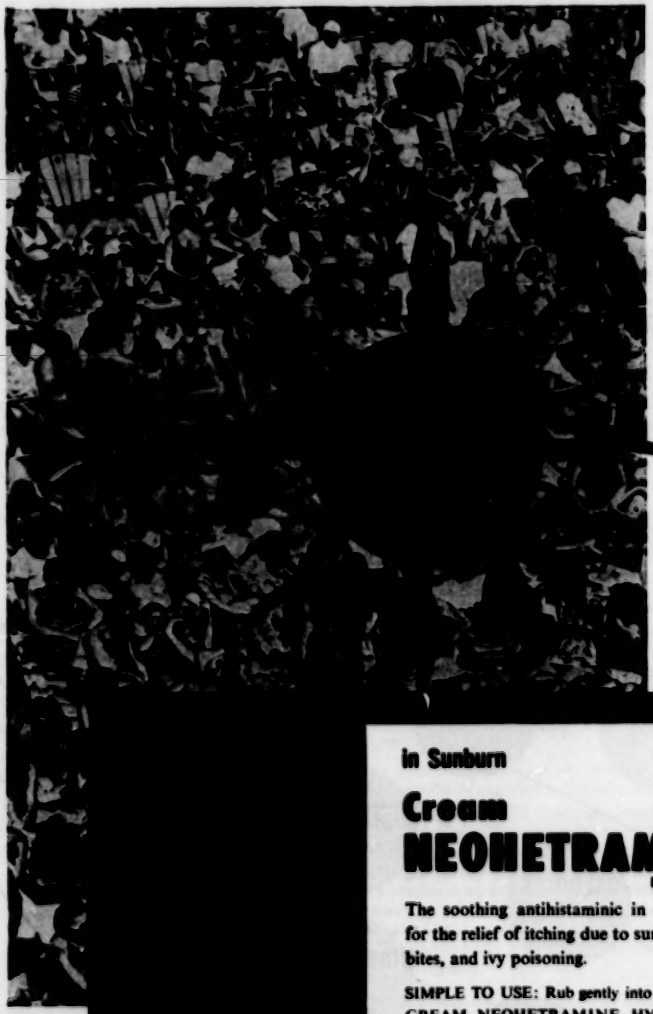
NAME.....

ADDRESS.....

.....

only
$3.00

**CONCISE
PRACTICAL
AUTHORITATIVE**



in Sunburn

Cream NEOHETRAMINE®

Hydrochloride

The soothing antihistaminic in cream form for the relief of itching due to sunburn, insect bites, and ivy poisoning.

SIMPLE TO USE: Rub gently into affected areas CREAM NEOHETRAMINE HYDROCHLORIDE, 2%: in 1 oz. tubes.

Neohetramine is the registered trademark of the Nepera Chemical Co., Inc., for its brand of thenylamine — N, N-dimethyl-N' p-methoxybenzyl-N' (2-pyrimidyl) ethylenediamine.

Wyeth Incorporated • Philadelphia 3, Pa.

Wyeth

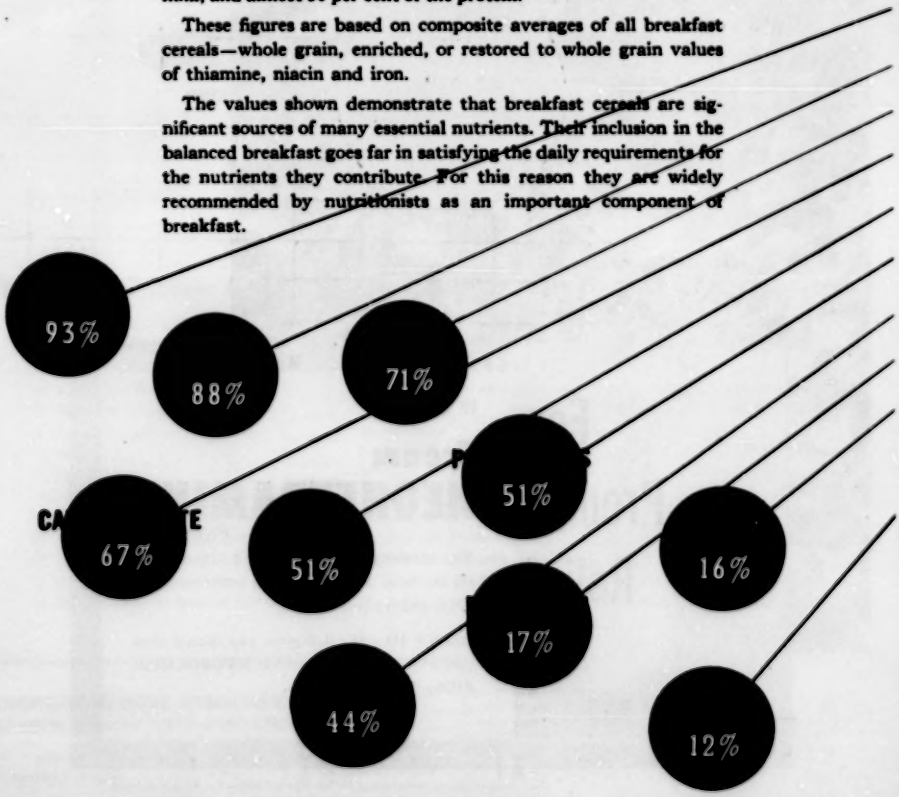
WHAT THE BREAKFAST CEREAL CONTRIBUTES

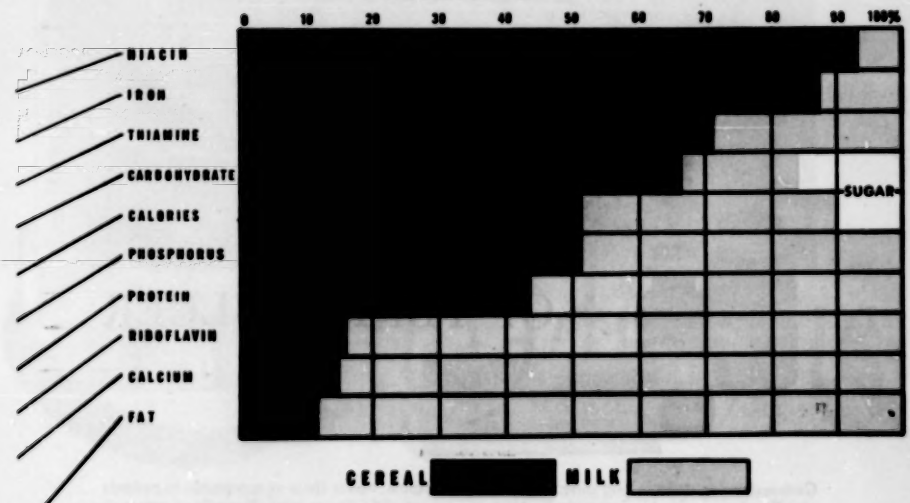
in the Cereal and Milk Serving

That breakfast cereals make a significant contribution to the overall nutrient content of the cereal and milk serving is readily apparent from the bar chart. In the case of five of the nine nutrients, as well as in calories, the breakfast cereal alone provides more than 50 per cent of the total amounts contributed by both cereal and milk, and almost 50 per cent of the protein.

These figures are based on composite averages of all breakfast cereals—whole grain, enriched, or restored to whole grain values of thiamine, niacin and iron.

The values shown demonstrate that breakfast cereals are significant sources of many essential nutrients. Their inclusion in the balanced breakfast goes far in satisfying the daily requirements for the nutrients they contribute. For this reason they are widely recommended by nutritionists as an important component of breakfast.





The chart illustrates how the chief components of the cereal serving (1 oz. of breakfast cereal, 4 oz. of milk, 1 teaspoonful of sugar) nutritionally supplement each other.

In addition to contributing a host of essential nutrients, breakfast cereals perform another, largely unrealized, function. In 1948, an estimated two billion quarts of milk were consumed with breakfast cereals. This quantity represents 16 billion cereal servings, or 66 quarts of milk per family per year. In view of the fact that about 40 per cent of our adult population does not drink milk as such, breakfast cereals perform the outstanding function of bringing milk into the dietaries of many adults who otherwise would not receive this essential food. Thus they contribute to the calcium intake of many individuals and aid in overcoming the widespread calcium deficiency of many adult diets.*

*Stearns, G.: Human Requirement of Calcium, Phosphorus and Magnesium, Council Report, J.A.M.A. 142:478 (Feb. 18) 1950.

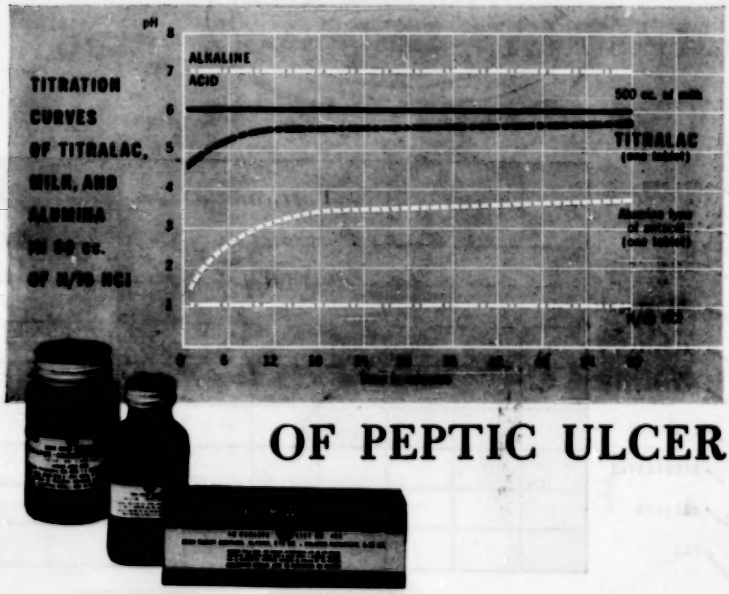
The presence of this seal indicates that all nutritional statements in this advertisement have been found acceptable by the Council on Foods and Nutrition of the American Medical Association.

CEREAL INSTITUTE, INC.

135 South La Salle Street • Chicago 3

A RESEARCH AND EDUCATIONAL ENDEAVOR DEVOTED TO THE BETTERMENT OF NATIONAL NUTRITION

NON-SURGICAL TREATMENT



OF PEPTIC ULCER

Gastroenterologists have long endorsed the use of milk, when practicable, for its ideal acid-converting power and buffering capacity.[1, 2] In a recent comprehensive paper, Aaron[3] and others[4, 5, 6] express a preference for calcium carbonate as the antacid to be employed.

TITRALAC, by combining proper proportions of purified calcium carbonate and the amino acid glycine, *provides an acid-converting and buffering effect practically equivalent to that of fresh milk*, as shown in the above chart.* Just 1 TITRALAC tablet is equivalent to an 8-ounce glass of milk in antacid effect and provides quick and long-lasting relief from the distressing symptoms of hyperacidity.

The very agreeable taste of soft-massed TITRALAC tablets, which is achieved without employing taste-disguising, acid-generating sugars in the formula, makes them as acceptable to patients as an after-dinner mint. Prescribing TITRALAC eliminates the probability of unfavorable reactions often associated with the taking of metallic-tasting, astringent tablets or liquids, and ensures adherence to the prescribed dosage.

TITRALAC tablets are supplied in bottles of 100 and convenient-to-carry packages of 40. TITRALAC powder is also available, in 4-oz. jars.

REFERENCES

1. Bassett, N. E., and Flexner, J.: Ann. Int. Med. 18: 193 (1944). 2. Freezer, C. R. E.; Gibson, C. S., and Matthews, E.: Guy's Hosp. Reports 78: 191 (1928). 3. Aaron, A. H.; Lipp, W. F., and Milch, E.: J. A. M. A. 139: 514 (Feb. 19) 1949. 4. Kirsner, J. B., and Palmer, W. L.: Illinois M. J. 94: 357 (Dec.) 1948. 5. Kimball, S.: in Practice of Medicine (Tice). Hagerstown, Md., W. F. Prior Company, Inc., 1948, p. 210. 6. Special Article: M. Times 76: 10 (Jan.) 1948.

*The formula of TITRALAC is one whose composition and mode of action are recognized by U.S. Patent No. 2,429,596.

Samples and literature to physicians upon request.

SCHENLEY LABORATORIES, INC., 350 FIFTH AVENUE, NEW YORK 1, N. Y.

©Schenley Laboratories, Inc.

Artist's rendering of entrance to Medical School, Washington University, St. Louis, Mo.

American Journal of Obstetrics & Gynecology Reports on

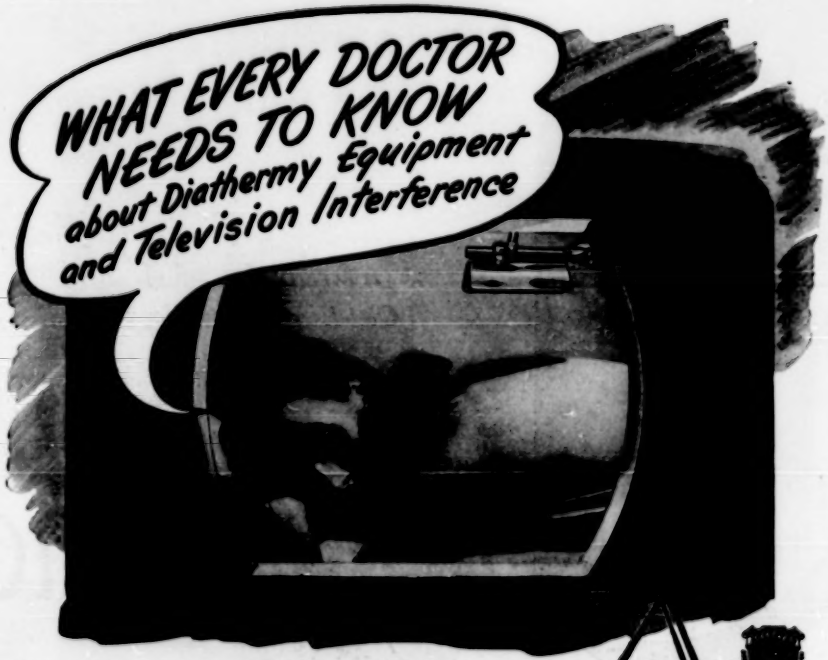
Sulfadiazine

A dozen or more articles in this journal have referred to the value of sulfadiazine in the treatment of gynecological infections and of sepsis accompanying pregnancy and childbirth. Surgeons, gynecologists and obstetricians have found, during an experience extending over many years, that sulfadiazine is frequently the sulfonamide of choice.

AMERICAN JOURNAL OF OBSTETRICS & GYNECOLOGY *This journal has had two publishers and two names since its first appearance in 1868. Between this year and 1920, it was issued by William Wood & Company under the title of the "American Journal of Obstetrics & the Diseases of Women and Children." From 1920 on it has been published under its present name by C. V. Mosby Company. Its pages are open to the clinician, the pathologist, the research worker and the sociologist; and are of interest to the general practitioner, as well as to the specialist. The present editor, Dr. G. W. Kosmak, has been in office since 1909.*

LEDERLE LABORATORIES DIVISION AMERICAN CYANAMID COMPANY 30 Rockefeller Plaza, New York 20, N. Y.

WHAT EVERY DOCTOR NEEDS TO KNOW about Diathermy Equipment and Television Interference



No doctor today can afford to be without adequate diathermy equipment.

BUT — be sure before you buy that you're not inviting TV trouble. FCC approval does *not* guarantee freedom from interference. Buy MICROTHERM and play safe.

MICROTHERM Radar Diathermy employs frequencies way above the television wave range. There's no interference.

Ask your dealer to give you a demonstration of the modern Raytheon Microtherm, or write for Bulletin DL-MED601.

Approved by the F. C. C. Certificate No. D-477 Underwriters' Laboratories

Microtherm RADAR DIATHERMY MEANS:

Penetrating energy for deep heating — desirable relationship between fat and vascular tissue temperature, cutaneous and muscle temperature — effective production of active hyperemia — precise application over large or small areas — no tuning, no electrodes, no pads, no shocks or arcs, no contact between patient and directors.

RAYTHEON MANUFACTURING COMPANY
POWER TUBE DIVISION
WALTHAM 54, MASSACHUSETTS

RAYTHEON

Excellence in Electronics

Urokon Sodium Brand
of Sodium Acetrizoate

1 Low Toxicity
2 Few Side Reactions
3 High Quality Pyelograms
4 Quick Pictures
5 Economical
6 Immediately Available

Urokon is immediately available in convenient packages of one, five and twenty ampuls of 25 cc each.

—a new Contrast medium for Urography by

Mallinckrodt®

MALLINCKRODT CHEMICAL WORKS
Mallinckrodt St., ST. LOUIS 7, MO.
72 Gold Street, NEW YORK 8, N. Y.
CHICAGO • CINCINNATI • CLEVELAND • LOS ANGELES •
PHILADELPHIA SAN FRANCISCO • MONTREAL • TORONTO

May we send you reprints of published clinical reports and other data concerning the above points? Mail the coupon.

Mallinckrodt Chemical Works
Second & Mallinckrodt Sts., St. Louis 7, Mo.
or
72 Gold Street, New York 8, N. Y.

Gentlemen: Please send me full information and clinical reports on Urokon Sodium.

NAME_____ M.D.

STREET_____

CITY_____ STATE_____

The sodium salt of para-aminosalicylic acid has now been accepted by the Council on Pharmacy and Chemistry. PASEM SODIUM (Massengill brand of Sodium Para-Aminosalicylate) has proved of distinct value as adjunct therapy in tuberculosis. Its chief value is in conjunction with streptomycin because it may produce some additive effects and may delay the development of bacterial resistance.

In streptomycin resistant cases, PASEM SODIUM may be indicated alone since resistance to this chemical usually develops slowly.

For convenience in administration, PASEM SODIUM is supplied in gelatin capsules, each containing 0.5 Gm. The usual dose is 15 Gm. a day.

Write for detailed literature.

SEMCO

THE S. E. MASSENGILL COMPANY
Bristol, Tenn.-Va.
NEW YORK • SAN FRANCISCO • KANSAS CITY

In pulmonary infection

cases resistant to other antimicrobial therapy[1,2]

- lobar pneumonia
- bronchopneumonia
- lung abscess...

Favorable response obtained with

CRYSTALLINE

Terramycin

HYDROCHLORIDE

New Council-accepted broad-spectrum antibiotic orally effective—well tolerated

1. Terramycin may be highly effective even when other antibiotics fail.
2. Terramycin may be well tolerated even when other antibiotics are not.

suggested for: *acute pneumococcal infections, including lobar pneumonia, bacteremia; acute streptococcal infections, including erysipelas, septic sore throat, tonsillitis; acute staphylococcal infections; bacillary infections, including anthrax; urinary tract infections due to E. coli, A. aerogenes, Staphylococcus albus or aureus, and other Terramycin-sensitive organisms; brucellosis (abortus, melitensis, suis); hemophilus infections; acute gonococcal infections; lymphogranuloma venereum; granuloma inguinale; primary atypical pneumonia; typhus (murine, epidemic, scrub); rickettsialpox.*

Dosage: 2 to 3 Gm. daily by mouth in divided doses q. 4 or 6 h. is suggested for acute infections.

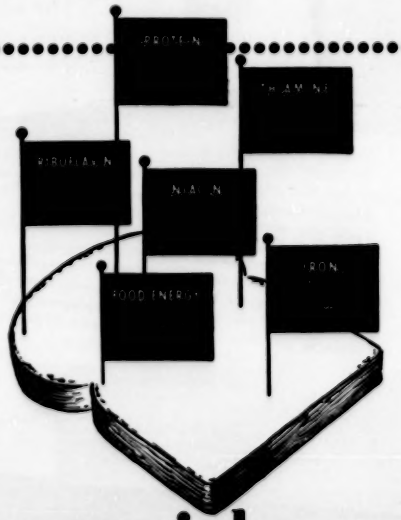
Supplied: 250 mg. capsules, bottles of 16 and 100;
100 mg. capsules, bottles of 25;
50 mg. capsules, bottles of 25.

Pfizer

WHEN YOU ADVISE ON DIETARY CONTROL OF EXCESS WEIGHT, what do you say about *bread?* The following statement is accepted by the Council on Foods and Nutrition of the American Medical Association:

IF YOU'RE DIETING TO LOSE WEIGHT, remember that calories are what you want to cut, not essential vitamins and mineral nutrients. The thiamine, niacin, riboflavin and iron in enriched bread and flour help you keep fit while you're reducing.

ACCEPTED
AMERICAN MEDICAL ASSOCIATION



***THERE'S* 6-way nourishment**

IN *ENRICHED* BREAD AND FLOUR

Copr. 1950, by Wheat Flour Institute,
309 W. Jackson Blvd., Chicago 6, Ill.

Frederic Fenger 1877–

Frederic Fenger, a pioneer in the field of Endocrinology, has completed 44 years of continuous investigation in this field while associated with The Armour Laboratories.

Frederic Fenger, a nephew of the renowned surgeon and lecturer, Christian Fenger, was born in Copenhagen, Denmark, November 12, 1877. He graduated from the University of Copenhagen in 1901 and came to the United States in 1904. In 1906 he joined The Armour Laboratories, and developed the research laboratory of organotherapeutics. During his active laboratory research, Fenger published 36 articles. His early work on enzymes assisted greatly in a clearer understanding of enzymosis as related to body function, as well as the application of enzymotic action when applied to many chemical processes. In 1927, Frederic Fenger produced a 70,000 Pepsin by isoelectric precipitation — this is the purest known form

The study of the thyroid gland also was an all important contribution by the scientist Fenger. His collaboration, in 1913, with Seidell of the United States Public Health on the study of the seasonal variation of the iodine content in livestock animals introduced the need for accurate standardization procedures in the manufacturing and processing of thyroid for medicinal purposes.

Fenger assisted in the standardization of Posterior Pituitary preparations and prepared the first standard, which was adopted later and still remains the standard for determining the oxytocic activity of the posterior pituitary gland.

Fenger's assistance to the many early investigators in the field of Endocrinology was worldwide. Many scientists received their early guidance from Fenger's inspirations and relied on his ability and innate creative ability to supply them with the initial starting material for many pioneer

Sixteenth in the series, PORTRAITS OF PIONEERS *in Endocrinology. A full-color reproduction of this painting, suitable for framing, is available upon request. On your professional letterhead, please address:*

A
ARMOUR
Laboratories
CHICAGO 9, ILLINOIS

When is metabolic combustion low?

Metabolic combustion is at a very low level in myxedema and cretinism. In lesser, subclinical or partial deficiencies physiologic oxidation is more rapid but still below normal. For both minor and major thyroid deficiencies, the quality of the thyroid medication is of utmost importance.

Thyroid Armour

is made from the world's largest supply of fresh raw material. Armour selects and blends the animal glands in order to compensate for their regional and seasonal variation in iodine content. Armour was also first to institute methods of assaying and blending the glands to fixed standards.
Supplied in $\frac{1}{10}$, $\frac{1}{4}$, $\frac{1}{2}$, 1, 2 and 5 grain tablets, plain or sugar coated, and in powder, U. S. P.

ARMOUR *Laboratories*

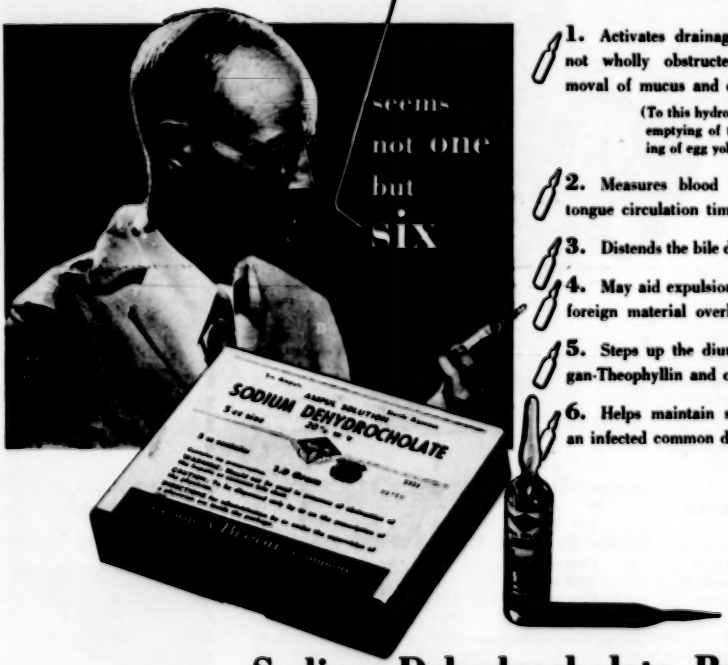
Have confidence in preparation you prescribe — specify "Armour"

HEADQUARTERS FOR MEDICINALS OF ANIMAL ORIGIN • CHICAGO 9, ILLINOIS

An Aid so Various

Sodium Dehydrocholate · BREON

These are the sundry uses of this intravenous "sextuplet":



1. Activates drainage of the bile ducts not wholly obstructed, encouraging removal of mucus and debris.

   (To this hydrocholeresis may be added emptying of the gallbladder by feeding of egg yolk and cream.)

2. Measures blood velocity by arm-to-tongue circulation time.

3. Distends the bile ducts for the surgeon.

4. May aid expulsion of small stones and foreign material overlooked at operation.

5. Steps up the diuretic effect of Salyrgan-Theophyllin and other mercurials.

6. Helps maintain surgical drainage of an infected common duct.

Sodium Dehydrocholate, Breon

20% w/v Solution is supplied in 5 cc ampuls, boxes of 6 and 25

For administration by mouth, Breon supplies Tablets Dehydrocholic Acid 0.25 Gm.

George A. Breon & Company

KANSAS CITY, MISSOURI

RENSSELAER, N. Y.
ATLANTA
SAN FRANCISCO

Doctor—maybe you can use this nutrition information about canned tomatoes

Tomatoes

Nutritive value in average* serving of canned tomatoes

Nutrient	Quantity	Percentage of Daily Recommended Allowance**	Percentage of Minimum Daily Requirement***
Food Energy (1)	24 calories	1	—
Protein (1)	1 gm.	1	—
Calcium (1)	6 mg.	1	1
Phosphorus (1)	20 mg.	—	3
Iron (1)	0.54 mg.	5	5
Vitamin A (5, 6)	1050 I.U.	21	26
Thiamin (4, 5)	0.056 mg.	4	6
Riboflavin (2, 3)	0.029 mg.	2	1
Niacin (3, 4)	0.75 mg.	5	—
Vitamin C (5, 6)	18 mg.	24	61

*108 grams **Percentage based on Recommended Daily Allowance for physically active man—National Research Council. ***Percentage based on Minimum Daily Requirement for adult over 12 years of age—Food and Drug Administration.

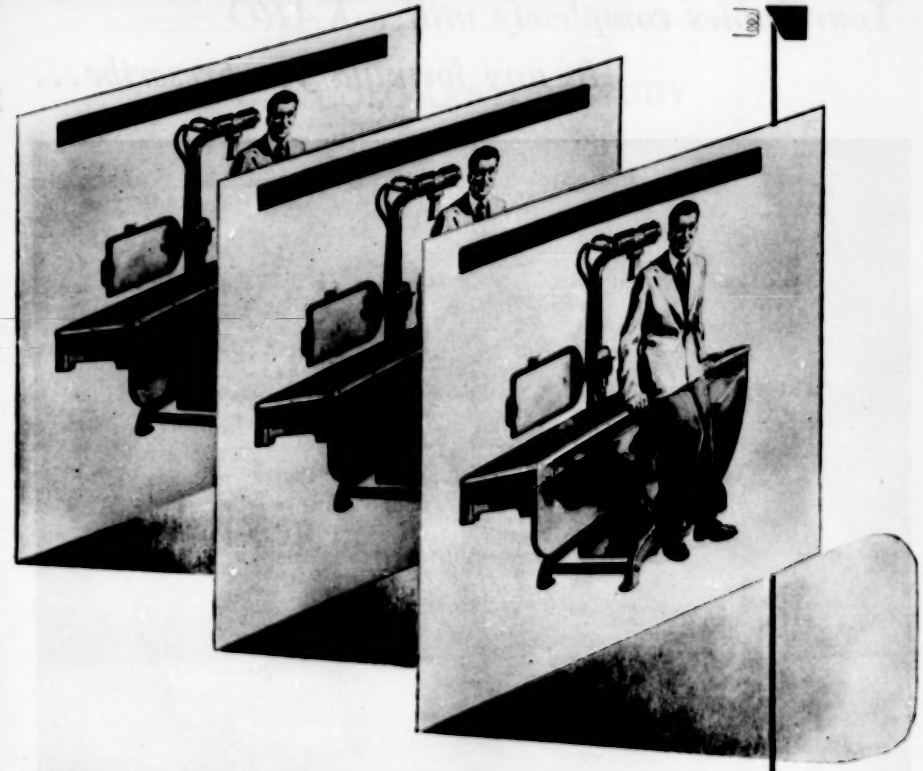
1. Food Research *11*, 391 (1946)
2. J. Nutrition *28*, 123 (1944)
3. J. Am. Dietet. Assoc. *21*, 357 (1945)
4. J. Nutrition *28*, 117 (1944)
5. J. Am. Dietet. Assoc. *23*, 226 (1947)
6. J. Nutrition *28*, 107 (1944)

This information is presented so that your secretary may clip it for your abstract file. If you would like free reprints of other advertisements providing similar information on salmon and corn, write to:

General Research Laboratory, American Can Co.
Maywood, Illinois

The Seal of Acceptance denotes that this advertisement has been reviewed by the Council on Foods and Nutrition of the American Medical Association and has been accepted by them.

American Can Co., *New York • Chicago • San Francisco • Hamilton, Canada*



there are more Picker "Century" 100 ma x-ray units actively in use than any other similar apparatus.

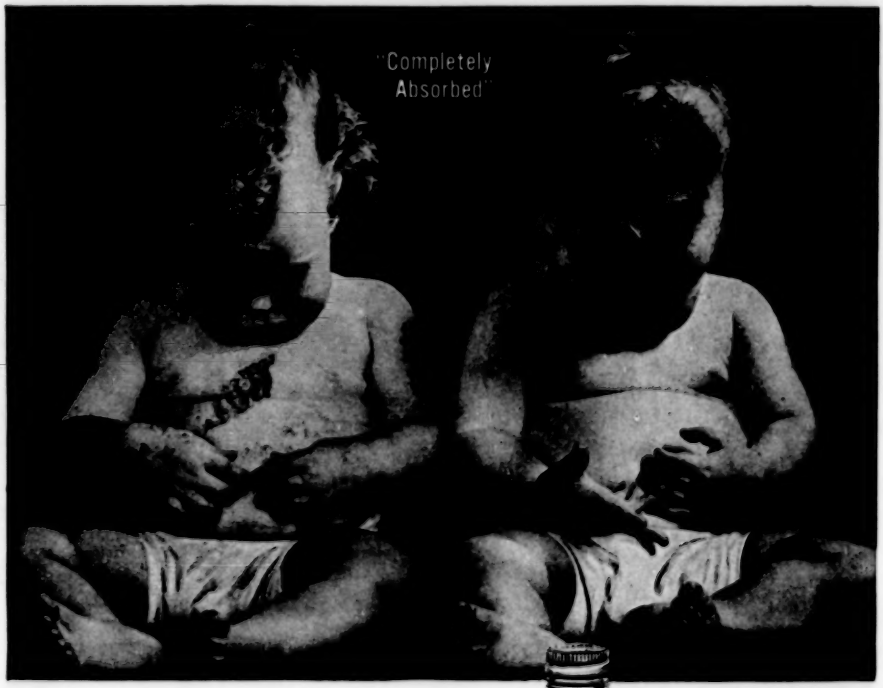
The "Century" owner is a **owner**
Let your local Picker man show you why

PICKER X-RAY CORP., 300 FOURTH AVE., NEW YORK 10.

There are Picker Service Depots and Sales Offices in principal cities of the U. S. and Canada: all alertly at your service in providing x-ray apparatus, accessories, and supplies.

★
x ray

Your babies completely utilize KARO in any formula you prescribe...



Physicians **have long recognized KARO® Syrup as a perfect carbohydrate for milk modification. Being a mixture of dextrose, maltose and dextrins, KARO is completely absorbed and utilized by the infant.**

Each carbohydrate is readily assimilated at its own intestinal level. This helps prevent fermentation and promotes absorption by all infants, well, feeble or sick.

CLINICAL POINTERS

KARO completely provides the carbohydrate needs of infants. Prescribe it in any formula to fulfill total caloric requirements effectively.

KARO is well tolerated... may be safely prescribed for the premature... well or sick infants.

KARO is easily digested ...without inducing intestinal irritation, fermentation or distention. Prescribe KARO with confidence for satisfactory weight gains in all infants.

KARO Syrup is readily available at food stores everywhere.

Medical Division

CORN PRODUCTS REFINING COMPANY

17 Battery Place • New York, N. Y.

when pregnancy is contraindicated . . .

A COMPARATIVE STUDY

THE EFFICACY OF THE SUPPOSITORY FOR CONCEPTION CONTROL

***"One of the greatest obstacles to the prescription of contraceptives by physicians has been the belief that the diaphragm with a spermicidal jelly or cream is the only reliable method which the patient herself can employ."**

" However, it must be recalled again that effectiveness depends primarily on acceptability and, in general, the simpler the method the more acceptable and, therefore, the more effective. We believe, therefore, that a suppository containing the same material found in a cream or a jelly will prove more effective on a large scale because its use is simpler. . . ."

" Two separate studies are reported evaluating the efficacy of certain simple methods of contraception which do not entail the use of the diaphragm—one carried out in Baltimore and the other in Columbia, S. C., and vicinity. . . ."

" It may be that certain women, highly skilled in the insertion of the diaphragm, will receive better protection from that technic, but surely mass studies on the diaphragm have not shown greater efficacy than is reported in this paper by simpler procedures. Hence, the conclusions would seem inescapable that these latter methods—especially the suppository, the simplest of them all—deserve more widespread trial than they have heretofore received."*

Lorophyn® Suppositories (N.N.R.) contain phenylmercuric acetate 0.05% and glyceryl laurate 10% in a water-dispersible, self-emulsifying, synthetic wax base. Hermetically sealed in foil, they will not leak in hot weather.

* Eastman, N. J. & Seibels, R. E.: *The Efficacy of the Suppository and of Jelly Alone as Contraceptive Agents*, J. A. M. A. **139**:16 (Jan. 1) 1949. **Reprint on request.**

EATON LABORATORIES, INC., NORWICH, N. Y.

When a jelly is preferred—**LOROPHYN JELLY (N.N.R.)** also contains the powerful spermicide: phenylmercuric acetate 0.05%, and polyethylene glycol of mono-iso-octyl phenyl ether 0.3%, methyl p-hydroxy benzoate 0.05% and sodium borate 3% in a special jelly base.

For complete, smooth estrogenic effect with maximum convenience

Amnestrogen

SQUIBB Conjugated Estrogens. Potency Expressed as Sodium Estrone Sulfate

- *smooth-acting*
- *naturally occurring*
- *water-soluble, hence, rapidly absorbed*

Whenever estrogens are indicated:
Amnestrogen enables you to replace physiologic amounts of estrogens with minimal side effects.

Am. Ed. 1958, Apr.

Amnestrogen—*indications and dosage*

menopausal syndrome	AVERAGE DOSE—One 1.25 mg. tablet daily or 0.625 mg. twice daily or 0.3 mg. four times daily. For 1 or 2 weeks and thereafter the smallest dose which will prevent return of symptoms. ACUTE CASES— 2.5 mg. daily, or 1.25 mg. twice daily.
senile vaginitis, kraurosis vulvae, pruritus vulvae	AVERAGE DOSE—1.25 mg. or more daily.
functional uterine bleeding	7.5 mg. daily for 3 to 5 days or until bleeding stops; non-endocrine causes to be first excluded. Alternating therapy with progesterone should be considered.
primary amenorrhea and other symptoms of hypogonadism	Dosage individualized according to development of secondary sex characteristics. In primary amenorrhea – 1.25 to 3.75 mg. daily for 24 days, accompanied by progesterone therapy.
relief of breast engorgement in suppressed lactation	5 mg. daily for 2 or more days.
relief in prostatic carcinoma	Not less than 3.75 mg. daily for several weeks; then halve the dosage.
palliation of inoperable and terminal mammary cancer	30 mg. daily;* for at least 2 months for subjective response and 5 months for objective response. Estrogens should not be given to a woman with breast cancer who is less than 5 years postmenopausal or whose disease is amenable to surgery or roentgen ray.

*New and Non-official Remedies, 1950, (in press).

"AMNESTROGEN" IS A TRADEMARK OF E. R. SQUIBB & SONS

Literature available upon request.
E. R. Squibb & Sons, 745 Fifth Avenue, New York 22, N.Y.

SQUIBB

Four potencies for flexibility in dosage: 0.3 mg. tablets, bottles of 100.
0.625 mg. tablets, bottles of 100 and 1000.
1.25 mg. tablets, bottles of 100 and 1000.
2.5 mg. tablets, bottles of 25 and 100.

Amnestrogen

SQUIBB Conjugated Estrogens; Potency Expressed as Sodium Estrone Sulfate

just enough of a good thing

Sedation with **AMYTAL** (Amobarbital, Lilly) is safely under your control.

Its effect can be terminated at will—within a single day.

Longer-acting barbiturates, such as phenobarbital, may load the effect of yesterday's sedative dose upon that of today's, and some of both may be added to that of tomorrow's. Too often this excessive carry-over produces unsafe daytime drowsiness, psychic depression, and mental confusion. The danger of overloading with long-acting barbital derivatives is still greater when they are detained by damaged renal tissue. In contrast, **AMYTAL** is not dependent upon normally functioning kidneys for elimination.

Every day the sedative dose is entirely destroyed within the body.

To retain control over your patients' sedation, to permit them, moreover, the safety of daytime alertness, prescribe **AMYTAL.**

Lilly ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

Complete literature on 'Amytal' is available from your Lilly medical service representative or will be forwarded upon request.

9

The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 143, NO. 12 — CHICAGO, ILLINOIS — JULY 22, 1950

COPYRIGHT, 1950, BY AMERICAN MEDICAL ASSOCIATION

RECENT ADVANCES IN KNOWLEDGE OF FUNGOUS DISEASES OF THE LUNGS

With Special Reference to Coccidioidomycosis and Histoplasmosis

H. E. BASS, M.D.
New York

The more recent advances in knowledge of coccidioidomycosis and histoplasmosis are attributable in some respects to circumstances arising out of World War II. Although knowledge of other fungous diseases has also been extended, the two aforementioned infections have exhibited such a historical and epidemiologic parallelism and the advances in the concepts of both diseases have been so rapid that it seems proper at this time to summarize their present status.

COCCIDIOIDOMYCOSIS

Pathogenesis and Distribution.—Coccidioidomycosis, first described by Posadas [1] and Wernicke,[2] was originally seen in the Chaco region of South America. Shortly thereafter, the first 2 cases on the North American Continent were described by Rixford and Gilchrist.[3] The organism, Coccidioides immitis, was believed to be a protozoan parasite until Ophüls and Moffitt [4] isolated the fungus from their patient and proved its etiologic relationship. For the next thirty years, the history of coccidioidomycosis was noteworthy for the numerous reports of its occurrence in a disseminated form which became known as coccidioidal granuloma or California disease. In this form the infection was described as almost invariably fatal. It was recognized that the disease seemed to be confined to California, specifically to the San Joaquin Valley, although a few cases were noted in persons who apparently had never been in California.

In 1932 Stewart and Meyer [5] reported the isolation of coccidioides from soil in Kern County, California, and thus contributed a noteworthy advance in the epidemiology of this disease. It remained for Dickson and Gifford [6] to show that the benign infection called valley fever, characterized by pneumonia and erythema nodosum, represented the initial benign form of coccidioidomycosis and that the granuloma, or disseminated, form was a later serious systemic manifestation.

After the pathogenesis of the disease had been clarified, advances were made in diagnosis principally by the use of the coccidioidin skin test and serologic tests, the complement fixation and precipitin tests. This knowledge was stimulated as a result of war experience, when hundreds of thousands of Army personnel were stationed in the Southwest. Studies showed that upward of 25 per cent of Army personnel stationed in the endemic areas became infected.[7] New endemic areas were discovered. Combined civilian and military experience has shown that the endemic areas include: Southern California, particularly the southern part of the San Joaquin Valley and the region extending over the Coast Range without reaching the coast; a large part of West Texas and the area along most of the Mexican border; Southern New Mexico; Southern and Central Arizona, and the southern tips of Utah and Nevada.[8]

Clinical Observations.—An important contribution to the clinical knowledge of coccidioidosis concerned the resolution of the initial pneumonic infection.[9] This first infection with coccidioides is the result of aspiration into the respiratory tract of the chlamydospores, the vegetative form of the organism. It is manifested clinically by an acute pneumonia indistinguishable from other types of pneumonia, although many asymptomatic or subclinical infections undoubtedly also occur. The pneumonic density seen on roentgen examination frequently disappears completely, but a considerable number of cases have incomplete resolution with residual infiltrations, of which rounded nodular densities and cavities are most characteristic. Delayed resolution in atypical virus pneumonia has been recognized but does not approach the persistence of residual coccidioidal pulmonary lesions. The importance of this phenomenon has been recognized, and a large number of veterans with residual coccidioidal lesions have been kept under observation, in some instances up to seven years after the initial infection.[10] It was noted that the residual lesions were of all types, i. e., nodular densities, cavities, mottled infiltrations, fibrosis, pleural effusion and calcification. These residual pulmonary lesions characteristically showed little or no change during the period of observation. All the patients reacted to coccidioidin in 1:100 dilution. The reactions were usually mild (1 or 2 plus) in contrast to the stronger

---

Read at the Third Annual Clinical Session of the American Medical Association, Washington, D. C., Dec. 8, 1949.

Associate physician, pulmonary diseases, Jewish Memorial Hospital (New York) and Beth-El Hospital (Brooklyn).

1. Posadas, A.: Un nuovo caso de micosis fungoidea con pseroespermias, An. d. Circ. Med. argent. **13**: 585, 1892.

2. Wernicke, R.: Ueber einen Protozoen befund bei Mycosis Fungoides, Zentralbl. f. Bakt. **12**: 859, 1892.

3. Rixford, E., and Gilchrist, T. C.: Two Cases of Protozoan (Coccidioidal) Infection of the Skin and Other Organs, Johns Hopkins Hosp. Rep. **1**: 209, 1896.

4. Ophüls, W., and Moffitt, H. C.: A New Pathogenic Mould, Philadelphia M. J. **5**: 1471, 1900.

5. Stewart, R. A., and Meyer, K. F.: Isolation of Coccidioides Immitis from the Soil, Proc. Soc. Exper. Biol. & Med. **29**: 937, 1932.

6. Dickson, E. C., and Gifford, M. A.: Coccidioides Infection (Coccidioidomycosis) II. The Primary Type of Infection, Arch. Int. Med. **62**: 853 (Nov.) 1938.

7. Smith, C. E.; Beard, R. R.; Rosenberger, H. G., and Whiting, E. G.: Effect of Season and Dust Control on Coccidioidomycosis, J. A. M. A. **132**: 833 (Dec. 7) 1946.

8. Smith, C. E.: Recent Progress in Pulmonary Mycotic Infections, California Med. **67**: 1 (Sept.) 1947.

9. Bass, H. E.; Kouperstein, S. I.; Friedman, M. M., and Kastlin, G. H.: Pulmonary Coccidioidomycosis, Dis. of Chest **12**: 1 (Sept.) 1946.

10. Bass, H. E.; Schomer, A., and Berke, R.: Coccidioidomycosis-Persistence of Residual Pulmonary Lesions, Arch. Int. Med. **82**: 519 (Dec.) 1948.

reaction (3 to 4 plus) ordinarily seen in early, acute cases of coccidioidal infection. The resemblance of the residual pulmonary lesions to tuberculosis was pronounced. In a number of cases a diagnosis of tuberculosis had been made after return of the patient to civilian life, usually after routine chest survey or preemployment roentgen examination. Occasionally the presence of a positive reaction to both the tuberculin and the coccidioidin skin test made diagnosis difficult. In such cases a presumptive diagnosis of coccidioidomycosis was made on the basis of the following criteria:

1. History of exposure in an endemic area.

2. Roentgen observation of a pulmonary lesion, usually a solitary cavity or nodular density, which showed no change after months or years of observation.

3. Presence of an identical lesion on the roentgenogram taken on release of the patient from military service.

4. Positive reaction to the coccidioidin skin test.

5. Absence of tubercle bacilli. This criterion may not be valid. I have seen 2 cases of combined tuberculosis and coccidioidomycosis, and an appreciable number of others have been reported in the literature; hence, this unusual entity must also be considered.

The outstanding feature of these patients was their well-being. Almost all the patients were asymptomatic. The notable exceptions included 1 patient with recurrent hemoptysis from a cavity and 1 patient with pleural effusion.

Therapy.—Of the residual lesions, the coccidioidal cavity is perhaps the most important from a therapeutic standpoint. One is impressed by its benign behavior. Unlike tuberculosis, spread of the disease to the remainder of the lung fields or dissemination to distant organs seldom if ever occurs.

Also important in the approach to therapy is the improbability of contagion. It is generally believed that man becomes infected with coccidioidomycosis as a result of the inhalation of desert dust contaminated with chlamydospores of C. immitis. A parasitic stage in the life cycle of the fungus then occurs. It is believed that the saprophytic stage in the soil must then occur again before the fungus can be infectious to man. Recently, however, it was concluded from experiments with guinea pigs that coccidioidomycosis in human beings may be contagious.[11] Some clinical evidence against this conception has followed a study of intimate family contacts of patients with cavitary and disseminated coccidioidomycosis.[12] Chest roentgenograms and coccidioidin skin tests were performed after two or more years of exposure. None of the contacts became infected, additional evidence of the noncontagiousness of the disease.

In view of the generally benign nature of coccidioidal cavities, it is somewhat disturbing to note the recent papers describing pulmonary resection for these cavities. In some of these cases the indications for surgical intervention were loss of weight, malaise, danger of dissemination and fear of transmitted infection, indications which do not appear valid in consideration of the generally uncomplicated, asymptomatic behavior of the coccidioidal cavity. The experience of Smith, Beard and Saito[12a] with these cavity cases argues for a conservative nonsurgical approach. Indeed, treatment is not indicated for these cases except when severe hemoptysis occurs, a complication which happens infrequently.[13]

Differential Diagnosis.—From the standpoint of the general practitioner who may be the first to see the patient with a residual coccidioidal nodule or cavity, what are the important points to be remembered in differential diagnosis? First, an unexplained pulmonary infiltration in a veteran of World War II should immediately lead to careful questioning as to possible residence in or travel through the endemic area. It is to be remembered that the limits of the endemic areas have only recently been extended.

In the presence of a reasonable suspicion of exposure to the fungus, the use of the coccidioidin skin test becomes the most important requisite for a diagnosis of coccidioidal infection. During the war years and immediately afterward, the coccidioidin generally used was the Stanford coccidioidin prepared under the direction of Dr. Charles E. Smith. Commercially prepared coccidioidin is now available for use by all clinics, hospitals and private practitioners.[14] Coccidioidin should be diluted to desired strength with sterile isotonic sodium chloride solution. For sensitive patients (such as those with coccidioidal erythema nodosum) a 1:10,000 dilution of the coccidioidin is probably advisable. When only one test is practical, a 1:100 dilution has been used. This may evoke a severe local reaction and even some systemic reaction. However, there is no focal reaction and there is no danger of causing dissemination of an active infection or flaring up of a quiescent one. With extremely old infections and with pulmonary cavities suspected as coccidioidal, a final test with 1:10 dilution is indicated. Caution is necessary in interpretation because the cross reactions associated with histoplasmin sensitivity are increased with these stronger concentrations.

Coccidioidin is stable for several months in 1:100 dilution if kept refrigerated and uncontaminated. As in the Mantoux test 0.1 cc. of the antigen is injected intradermally. Readings are at twenty-four and forty-eight hours, and induration over 0.5 cm. in diameter at either time is considered positive. If only one reading is possible, that at forty-eight hours is preferable. The reaction is interpreted as in the tuberculin test.

A negative coccidioidin test, like a negative tuberculin test, apparently rules out infection except in the patients with coccidioidal granuloma, who are frequently anergic. In such patients the diagnosis can usually be established by recovery of the fungus from sputum, pus, lymph node biopsy or by means of serologic tests.

Given a patient with a history of exposure in an endemic area, with a positive coccidioidin skin test and an unexplained pulmonary density or cavity, how certain can one be of the diagnosis? An unquestionable diagnosis can be made only by isolation of the fungus. This may be difficult in the cases with residual lesions. A presumptive diagnosis may be based on a negative tuberculin test or positive serologic tests (in cases with cavities or disseminations). Finally, the unchanging characteristic appearance of a rounded nodule or cavity (frequently thin-walled, sometimes doughnut shaped) may aid in the final diagnosis.

11. Rosenthal, S. R., and Routien, J. B.: Contagiousness of Coccidioidomycosis: An Experimental Study, Arch. Int. Med. **80**:143 (Sept.) 1947.

12. Bass, H. E.; Schomer, A., and Berke, R.: Question of Contagion in Coccidioidomycosis: Study of Contacts, Am. Rev. Tuberc. **59**:632 (June) 1949.

12a. Smith, C. E.; Beard, R. R., and Saito, M. T.: Pathogenesis of Coccidioidomycosis with Special Reference to Pulmonary Cavitation, Ann. Int. Med. **29**:623 (Oct.) 1948.

13. Berke, R.; Schomer, A., and Bass, H. E.: Residual Cavities in Pulmonary Coccidioidomycosis: Follow-Up Studies, Dis. of Chest, **17**:84 (Jan.) 1950.

14. Cutter Laboratories, Berkeley, Calif.

Comment.—Treatment has already been discussed, as regards the persistent coccidioidal cavity. As has been pointed out, it is usually the case of cavity with persistent recurrent hemorrhage which requires therapy. The present point of view indicates that pulmonary resection or thoracoplasty or perhaps both measures are advisable. Decortication may be necessary for coccidioidal empyema following spontaneous pneumothorax in the peripherally located cavity. These indications for surgical treatment occur infrequently. It is to be reemphasized that because the risk of dissemination is negligible and the possibility of contagion is remote surgical intervention seldom need be employed.

The treatment of disseminated coccidioidomycosis has been noteworthy for the great variety of therapeutic agents which have been used, with little or no benefit. Recently, however, beneficial effects in this highly fatal form of coccidioidal infection with prodigiosin, prepared from Bacillus prodigiosus (Serratia marcescens) have been reported. Final conclusions regarding this latest form of therapy must await further investigation.

HISTOPLASMOSIS

Pathogenesis and Distribution.—Like coccidioidomycosis, histoplasmosis was once believed to be caused by a protozoan parasite, until De Monbreun [15] proved the causative organism, Histoplasma capsulatum, to be a fungus. The conception was that histoplasmosis was generally a fatal systemic disease involving the reticuloendothelial system. De Monbreun [16] suggested in 1939 that a relatively mild or nonfatal form of the disease might exist, akin to the milder form of coccidioidomycosis known as valley fever.

For some time, negative reactions to tuberculin tests in the presence of pulmonary calcifications were interpreted as being due to a loss of tuberculin allergy. The studies of Long and Stearns,[17] however, showed that there was an exceptionally high incidence of pulmonary calcifications in inductees from the Eastern Central states and a few states just west of the Mississippi and that the incidence of tuberculin negativity in these cases was too high to be explained on grounds of anergy.

In 1943 Smith [18] called attention to the problem of interpreting positive coccidioidin reactions in persons from the Ohio River basin and pointed out that this was the area of pulmonary calcification in tuberculin-negative persons and also the endemic area of histoplasmosis. The epochal studies of Christie and Peterson [19] soon demonstrated an association between histoplasmin sensitivity and pulmonary calcification in tuberculin-negative reactors. Palmer's subsequent investigations [20] dealing with the geographic differences in histoplasmin sensitivity in nurses indicated that the highest prevalence of histoplasmin sensitivity was in the Central states. However, demonstration of H. capsulatum as the etiologic agent was lacking. The existence of a cross reacting but much less virulent organism also had to be considered.

Postulating that these pulmonary calcifications might represent a primary, benign form of histoplasmosis, efforts were then made to discover early pulmonary infiltrates in the endemic area which could be attributed to histoplasma infection. Studies in school children of Kansas City [21] disclosed patients who were originally seen with roentgenograms of the chest interpreted as normal and negative histoplasmin reactions and in whom there subsequently developed pulmonary infiltrates or hilar adenopathy or both, along with a positive reaction to histoplasmin. These infiltrations could not be distinguished roentgenographically from active pulmonary tuberculosis. The H. capsulatum was isolated from one of the children with precalcific lesions, thus helping to bridge the gap in the chain of circumstantial evidence implicating that organism.

The development of calcification in some of these precalcific lesions has now been observed,[22] so that the pathogenetic process has been followed from the negative roentgenogram of the chest and negative histoplasmin reaction through the appearance of the parenchymal infiltrate (with concurrent change in cutaneous sensitivity) to the final calcified focus in the lung associated with a positive reaction to the histoplasmin test.

Clinical and Epidemiologic Aspects.—Like the residual lesions of coccidioidomycosis, nodular foci as well as cavities have been described in histoplasmosis. An interesting feature has been the occurrence of disseminated infiltrates resulting in "snowstorm" calcifications, evidently representing hematogenous dissemination. The epidemiology of these pulmonary calcifications is still the subject of investigation. The close analogy with coccidioidomycosis suggests that the respiratory tract is the probable portal of infection. If histoplasma is the causative agent, this presupposes the presence of the fungus in soil and possibly in infected animals, as Emmons [23] demonstrated for coccidioides in 1942. Again it was Emmons [24] who reported in 1949 the presence of H. capsulatum in both soil and rats in the endemic area.

The importance of soil aspiration in producing acute coccidioidal infection has been amply demonstrated by the experience of the thousands of soldiers who became infected while on desert training maneuvers. The mode whereby H. capsulatum could reach the respiratory tract has not been shown.

Differential Diagnosis.—There are so many gaps and unanswered questions concerning the etiologic agent or agents responsible for pulmonary calcifications in negative tuberculin reactors, that one is impelled to be conservative. Emmons [25] has pointed out the cross sensitivity between histoplasmin and blastomycin. The endemic areas for blastomycosis and histoplasmosis overlap. Tissue forms of blastomyces may resemble histoplasma forms. Thirty-eight per cent of Ohio children who reacted neither to histoplasmin nor to tuberculin showed pulmonary calcifications.[26] Perhaps the recent

15. De Monbreun, W. A.: The Cultivation and Cultural Characteristics of Darling's Histoplasma Capsulatum, Am. J. Trop. Med. **14**:193 (March) 1934.

16. De Monbreun, W. A.: The Dog As a Natural Host for Histoplasma Capsulatum: Case of Histoplasmosis in This Animal, Am. J. Trop. Med. **19**:363 (Nov.) 1939.

17. Long, E. R., and Stearns, W. H.: Physical Examination at Induction, Radiology **41**:144 (Aug.) 1943.

18. Smith, C. E.: Coccidioidomycosis, M. Clin. North America **27**:790 (May) 1943.

19. Christie, A., and Peterson, J. C.: Pulmonary Calcification in Negative Reactors to Tuberculin, Am. J. Pub. Health **35**:1131 (Nov.) 1945.

20. Palmer, C. E.: Geographic Differences in Sensitivity to Histoplasmin Among Student Nurses, Pub. Health Rep. **61**:475 (April 5) 1946.

21. Furculow, M. L.; Mantz, H. L., and Lewis, L.: The Roentgenographic Appearance of Persistent Pulmonary Infiltrates Associated with Sensitivity to Histoplasmin, Pub. Health Rep. **62**:1711 (Dec. 5) 1947.

22. Furculow, M. L.: Development of Calcification in Pulmonary Lesions Associated with Sensitivity to Histoplasmin, Pub. Health Rep. **64**:1363 (Nov. 4) 1949.

23. Emmons, C. W.: Isolation of Coccidioides from Soil and Rodents, Pub. Health Rep. **57**:109 (Jan. 23) 1942.

24. Emmons, C. W.: Isolation of Histoplasma Capsulatum from Soil, Pub. Health Rep. **64**:892 (July 15) 1949.

25. Emmons, C. W.; Olson, B. J., and Eldridge, W. W.: Studies of the Role of Fungi in Pulmonary Disease: I. Cross Reaction of Histoplasmin, Pub. Health Rep. **60**:1383, (Nov. 23) 1945.

26. Sontag, L. W., and Allen, M. F.: Lung Calcifications and Histoplasmin Tuberculin Skin Sensitivity, J. Pediat. **30**:637 (June) 1947.

development of a complement fixation test for histoplasmosis [27] will aid in more accurate diagnosis of that infection. If specific, such a test might be of great value in the differential diagnosis of early precalcific pulmonary infiltrates.

As with coccidioidin, the histoplasmin skin test is performed by injection of 0.1 cc. of diluted histoplasmin intradermally on the arm. A dilution of 1:1,000 is usually employed, although stronger dilutions (1:100) are also used. Unlike the coccidioidin skin test, erythema alone is not considered to indicate sensitivity. The chief value of the histoplasmin test lies in its use in the differential diagnosis of unexplained pulmonary infiltrates or calcifications, especially in tuberculin-negative reactors. In the patient with acute, disseminated histoplasmosis, analogous to the anergy of those with disseminated tuberculosis or coccidioidomycosis, reaction to the skin test is often negative. Histoplasmin is not as yet available commercially.

SUMMARY

Coccidioidomycosis should no longer be considered a rare disease confined to a small endemic area in the southwestern part of the United States. A high incidence (25 per cent) of infection occurred among Army personnel stationed in the endemic area during World War II. A similar incidence probably occurs in nonveteran civilians residing in or traveling through the endemic area for business, health or vacation purposes. Coccidioidomycosis should be considered in the differential diagnosis of unexplained pulmonary infiltrates especially with nodular densities and cavities which remain unchanged over long periods of time. The more widespread use of the coccidioidin skin test will aid in the diagnosis of coccidioidal lesions.

Histoplasmosis is now believed to exist in a benign form in a large endemic area of the United States, centering about certain East Central and South Central states. The predominant evidence indicates that a high percentage of tuberculin-negative reactors with pulmonary calcifications in this area react to histoplasmin. In some instances, early pulmonary infiltrates have been accompanied with negative to positive histoplasmin skin test conversion, and, more rarely, isolation of H. capsulatum from such patients has been accomplished. However, cross sensitivity of various fungi exists. Pulmonary calcifications are apparently nonspecific reactions to a variety of organisms. Further investigation is required to clarify the epidemiology and the role of the H. capsulatum in the production of pulmonary calcifications in tuberculin-negative persons in East Central United States.

CONCLUSIONS

1. The more recent advances in knowledge of coccidioidomycosis and histoplasmosis have been described.

2. Taken together, the area for endemic coccidioides and histoplasma infections includes a large section of the United States.

3. Primary infection with these or other fungous diseases should be considered in the differential diagnosis of atypical pneumonias or unexplained pulmonary infiltrates.

266 West End Avenue (23).

27. Campbell, C. C., and Saslaw, S.: Use of Yeast-Phase Antigens in Complement Fixation Test for Histoplasmosis: III. Preliminary Results with Human Sera, Pub. Health Rep. 64: 551 (May 6) 1949.

MENTAL CHANGES OCCURRING IN CHRONICALLY ANOXEMIC PATIENTS DURING OXYGEN THERAPY

J. H. COMROE Jr., M.D.
E. R. BAHNSON, M.D.
and
E. O. COATES Jr., M.D.
Philadelphia

Several reports have now appeared indicating that undesirable reactions may follow the administration of oxygen to patients with chronic anoxemia. Barach [1] noted that patients with chronic anoxemia may become irrational, stuporous or comatose when given 50 to 100 per cent oxygen to breathe; in his experience their mental state returned to normal and none of the patients died even though inhalation of oxygen was continued. Godfrey, Pond and Wood [2] studied an emphysematous patient who became deeply comatose within five minutes after the initiation of oxygen therapy (90 to 97 per cent) and regained consciousness with equal rapidity when the oxygen was removed. Davies and Mackinnon [3] reported on 2 patients with cor pulmonale who showed neurologic changes during inhalation of oxygen. In the first there developed uncontrollable myoclonic movements of his arms, which disappeared when he breathed air; the second became comatose within two hours and died within four hours after the initiation of oxygen therapy, although he had eaten breakfast normally and spoken sensibly just before this incident. Donald [4] saw a patient lapse into coma after twelve hours of oxygen therapy but regain consciousness shortly after withdrawal of oxygen, coincident with the development of intense cyanosis.

We also know of instances in which chronically anoxemic patients have unexpectedly lapsed into coma and died within twelve to twenty-four hours after institution of oxygen therapy. Because of inadequate study, however, such fatalities could not with any degree of certainty be related causally to the oxygen therapy. More recently, we have studied a patient who became comatose as a result of oxygen therapy and died five days later. Since then we have observed the development of mental changes ranging from somnolence to coma in 8 of 65 additional patients with mild to severe chronic anoxemia who were given high concentrations of oxygen to breathe. We are reporting these studies to confirm the occurrence of this serious reaction to oxygen therapy, to indicate its incidence and to discuss its possible causes.

The primary diagnoses in our patients were: emphysema 43; chronic congestive heart failure 9; pulmonary hemangioma 5; asthma 3; bronchiectasis 2; bronchogenic carcinoma 1; pulmonary mycosis 1; pulmonary vascular disease 1, and congenital heart disease 1. All patients were in a resting state at the time of the studies.

Oxygen was usually administered through a mouthpiece supplied by a demand regulator. The volume of

Supported by a grant from the Commonwealth Fund.
Research fellow of the American Academy of Allergy (Dr. Bahnson).
From the Department of Physiology and Pharmacology, Graduate School of Medicine, University of Pennsylvania.
This article is a revision of the paper read before the Section on Pathology and Physiology at the Ninety-Eighth Annual Session of the American Medical Association, Atlantic City, N. J., June 8, 1949.

1. Barach, A. L.: Ann. Int. Med. 12: 434-481, 1938; M. Clin. North America 704-718, 1944.
2. Godfrey, L.; Pond, H. S., and Wood, F. C.: Am. J. M. Sc. 216: 605-618, 1948.
3. Davies, C. E., and Mackinnon, J.: Lancet 2: 883-885, 1949.
4. Donald, K.: Lancet 2: 1056-1057, 1949.

expired gas was measured in a compensating Tissot spirometer. Arterial blood gas analyses were performed according to the technic of Van Slyke and Neill. Arterial p_H was measured at 38 C. in the closed glass electrode (Cambridge).

REPORT OF CASE

J. A., a white man aged 60, had frequent attacks of "pleurisy" with increasingly severe dyspnea over a two year period. On admission to the hospital he was slightly cyanotic but fairly clear mentally. The patient had distended neck veins, slight ankle and sacral edema, totally irregular cardiac rhythm, tachycardia (120 to 160 per minute), pulse deficit of about 20 per minute and normal blood pressure (135 systolic and 84 diastolic). Radiologic examination revealed enlargement of the heart and increased prominence of the pulmonary artery. The electrocardiogram showed changes indicative of cor pulmonale, right ventricular strain and auricular fibrillation. Blood studies showed: 5.4 million red blood cells; 15.6 Gm. hemoglobin; plasma carbon dioxide 42 millimoles per liter (95 volumes per cent); chlorides 85 millimoles per liter, and protein 6.3 Gm. per hundred cubic centimeters. The clinical impression was that the patient had emphysema (caused by previous pulmonary infections), right-sided heart failure and auricular fibrillation.

The patient was given digitalis, a mercurial diuretic and oxygen therapy (8 liters per minute using a B-L-B face mask [1]). Within two hours he became drowsy, and within ten hours he was comatose. During the next several days, whenever oxygen therapy was withdrawn the patient regained consciousness but had cyanosis, dyspnea and tachycardia. When oxygen therapy was resumed, his color improved and heart rate slowed but he again became stuporous. Oxygen therapy was continued because of the seriousness of his cardiac failure. After the third day he remained continuously in coma. Table 1 shows the pronounced depression of respiratory tidal and minute volume and consequent accumulation of carbon dioxide and respiratory acidosis that occurred during oxygen therapy. Despite frequent bronchoscopic drainage and attempts to induce hyperventilation by use of the Drinker respirator, the patient died five days after admission. Autopsy confirmed the diagnosis of emphysema, hypertrophy and dilatation of the right auricle and ventricle, enlargement of the pulmonary artery, pulmonary arterial and arteriolar sclerosis, terminal bronchopneumonia and atelectasis.

1. The B-L-B oxygen face mask is named for its designers, Boothby, Lovelace and Bulbulian.

After this case, careful observations were made on 65 additional patients with chronic anoxemia. Some mental changes developed in 8 patients during inhalation of oxygen; data on these are given in table 1.

COMMENT

There is no doubt that some chronically anoxemic patients may become somnolent or even comatose during the administration of 100 per cent oxygen. The reaction occurs infrequently, and serious consequences are rare. Unfortunately there is no certain clinical or laboratory basis for predicting which patients will or will not have an unfavorable response to oxygen therapy. In our experience (table 2) no patient became somnolent unless (*a*) his initial arterial pCO_2 (carbon dioxide concentration expressed in terms of pressure) was 50 mm. of mercury or more, (*b*) his arterial oxygen saturation was below 90 per cent and (*c*) oxygen therapy relieved the anoxemia. The reaction thus appears to be limited to patients who have pulmonary insufficiency for both oxygen and carbon dioxide.[6] However, there was no definite level of arterial oxygen saturation or pCO_2 at which the reaction occurred in all patients. Thus, 4 patients with arterial oxygen saturations of 26.8, 39, 55.2 and 55.4 per cent improved when given oxygen therapy; 1 of these patients had a pCO_2 of 130 mm. of mercury and a p_H of 7.23. The initial level of p_H was an unreliable guide, since three reactions occurred in patients with normal p_H, and a patient with a p_H of 7.23 improved remarkably during oxygen therapy. Six of the 9 patients (table 1) had congestive heart failure. However, mental changes did not develop in all our patients with heart failure and severe pulmonary insufficiency; some improved remarkably.

The cause of the mental changes during oxygen therapy is uncertain. Several possible mechanisms are (1) carbon dioxide narcosis; (2) cerebral vasospasm; (3) reflex depression of the cerebral cortex by high oxygen tension; (4) increased cerebrospinal fluid pressure, and (5) direct depression of the cerebral cortex by high oxygen tension.

6. We have never observed this phenomenon when oxygen was administered to patients with right-left shunts; such patients have no carbon dioxide retention and do not attain full saturation when breathing oxygen because of the presence of a venous-arterial shunt.

TABLE 1.—*Studies on 9 Patients with Chronic Anoxemia Before and During Inhalation of Oxygen*

	Patient	Clinical Diagnosis *	Mental Response During O_2 Inhalation	Time Breathing O_2 †	Art. O_2 Sat.		Art. pCO_2		Art. p_H		Resp. Minute Volume		Resp. Tidal Volume	
					Air	O_2	Air	O_2	Air	O_2	Air	O_2	Air	O_2
1	J. A.	Emphysema C. H. F.	Coma, death	2 to 4 hr.	68.7	100	125	150	7.12	7.06	4.6	2.2	191	120
2	C. H.	Emphysema T. B. C. H. F.	Stuporous, disoriented during O_2	15 min.	41.5	98.9	95	129	7.35	7.25	11.9	3.5	500	350
3	J. M.	Emphysema C. H. F.	Coma	75 min.	76.9	100	59	69	7.42	7.38	9.1	6.5	367	273
4	J. D.	Emphysema Br. Pn.	Coma for 2 hr.; then recovery with cont. O_2	17 hr. (45% O_2)	80.3	95.2	50	102	7.44	7.18	15.16	7.74	390	215
5	W. McP.	Emphysema C. H. F.	Drowsy	1½ hr. (100% O_2)	59	100	65	77	7.32	7.25	10.4	7.5	325	280
			Unconscious	2 hr. (nasal cath.)										
6	J. S.	Emphysema C. H. F.	Drowsy	7 min.	80	...	81	...	7.32	....	8.5	7.3	350	330
7	N. B.	Emphysema	Somnolent	35 min.	85.4	100	54	62	7.33	7.31	8.0	6.9	420	330
8	H. W.	Emphysema C. H. F.	Drowsy	12 min.	89	100	50	52	7.37	7.38	10.3	6.7	470	300
9	L. S.	Emphysema	Coma	10 min.	78	100	57	78	7.44	7.30	12.3	7.7	492	238

* C. H. F. denotes congestive heart failure; T. B., tuberculosis, and Br. Pn., bronchial pneumonia.
† Oxygen 100 per cent unless otherwise specified.

1. *Carbon Dioxide Narcosis.*—Anoxemia stimulates respiration as a result of reflexes aroused in the chemoreceptors of the carotid and aortic body. Oxygen therapy, by providing an inspired pO_2 of 760 mm. of mercury, relieves anoxemia and so reduces chemoreceptor activity and diminishes the minute and tidal volume of respiration (table 3). Similar results have been reported previously (Baldwin, Cournand and Richards [7] and Taquini and co-workers [8]). In the past considerably more emphasis was placed on "oxygen apnea" because of its dramatic nature. From the clinical point of view, moderate depression of respiration is more important because of its insidious nature. The latter is usually unrecognized because unsuspected; it results in inefficient ventilation of the lungs, poor elimination of carbon dioxide and accumulation of carbon dioxide in the blood and body tissues. Although it is commonly believed that an inspired concentration of 30 per cent carbon dioxide is required to produce unconsciousness, Dripps and Comroe observed the occasional development of stupor in normal young men breathing 10.4 per cent carbon dioxide for three to four minutes. The level of arterial pCO_2 in J. A., C. H. and J. D. (table 1) is about that attained by breathing 10.4 per cent carbon dioxide and could thus be within the narcotic range. However, somnolence occurred in 4 patients whose pCO_2 was between 52 and 77 mm. of mercury during inhalation of oxygen. Possibly patients with chronic anoxemia are more susceptible to the depressant effects of high concentrations of carbon dioxide; possibly the rate of change is of some significance. W. McP. and L. S. (table 1) breathed 10 per cent carbon dioxide in air for five minutes and did not become somnolent, although their arterial pCO_2 rose from 62 to 92.5 and from 57 to 120 mm. of mercury. Donald and Christie [10] and Taquini and associates [8] did not observe mental effects in their patients during the inhalation of 4 per cent carbon dioxide. Nevertheless, it would seem worth while to test the effect of such inhalations on larger numbers of patients with chronic anoxemia to determine the role of carbon dioxide narcosis in this phenomenon.

TABLE 2.—*Classification of Patients According to Initial Arterial pCO_2, p_H and Oxygen Saturation (Breathing Air)*

	No. of Patients with	
	Mental Changes	No Change
Initial arterial pCO_2 <30 mm. Hg	0	25
50 to 99	9	7
100 or more	1	1
Initial p_H >7.36	4	25
7.24 to 7.36	5	6
<7.24	2	1
Initial oxygen saturation 90 to 95%	0	30
80 to 89%	4	20
70 to 79%	4	4
<70%	1	2

TABLE 3.—*Change in Respiratory Minute Volume During Inhalation of Oxygen*

Range (%) Art. O_2 Sat. (Patients Breathing Air)	No. of Cases	Respiratory Min. Vol. Air	Respiratory Min. Vol. O_2	Percentage of Change	Percentage of Cases Showing a Decrease of Min. Vol.
66.8 to 70	6	8.97	5.5	−37.5	100
70 to 79.9	5	9.56	7.20	−24.7	80
80 to 89.9	24	11.0	9.14	−16	75
90 to 94.9	30	10.22	9.28	−9.2	74
95.8 to 94.9	63	10.1	8.74	−13.5	77
	(all cases)				
95 to 100	22*	7.6	8.2	+7.6	..

* Normal subjects.[9]

2. *Cerebral Vasospasm.*—Anoxemia is known to dilate cerebral blood vessels and to increase cerebral blood flow. Inhalation of 100 per cent oxygen by relieving anoxemia might theoretically lead to constriction or even spasm of cerebral vessels and thus precipitate coma. Kety and Wechsler [11] have measured cerebral blood flow and cerebral vascular resistance in 4 emphysematous patients with chronic anoxemia (table 4). There was no consistent or striking change in cerebral vascular resistance during inhalation of oxygen, indicating that any tendency toward constriction because of high oxygen tension was offset by a concomitant increase in arterial pCO_2. In 2 patients the cerebral blood flow was more than double that observed in normal subjects; in none was there a reduction in cerebral blood flow during inhalation of oxygen. Since cerebral vascular resistance did not change appreciably, the augmentation of cerebral blood flow was probably caused by the increase in mean arterial blood pressure resulting from better oxygenation of the heart.[12]

TABLE 4.—*Studies of Cerebral Circulation and Oxygen Consumption in 4 Patients with Chronic Anoxemia**

Patient	Art. O_2 Sat. Air	Art. O_2 Sat. O_2	C.B.F.† Cc./100 Gm./Min. Air	C.B.F.† Cc./100 Gm./Min. O_2	C.M.R.(O_2)‡ Cc./100 Gm./Min. Air	C.M.R.(O_2)‡ Cc./100 Gm./Min. O_2	M.A.B.P.§ Mm. Hg RA	M.A.B.P.§ Mm. Hg O_2	C.V.R.‖ Mm. Hg RA	C.V.R.‖ Mm. Hg O_2
W. McP.	58	100	118	144	2.8	2.6	65	98	0.6	0.7
W. S.	95	100	37	48	2.6	2.9	86	107	2.3	2.1
W. A.	87	100	50	52	2.8	3.4	98	115	1.9	2.2
A. G.	98	100	...	142	...	2.8	..	115	...	0.8

* These studies were performed by Drs. S. S. Kety and R. L. Wechsler of this department.
† C.B.F. denotes cerebral blood flow.
‡ C.M.R.(O_2) denotes cerebral metabolic rate for oxygen.
§ M.A.B.P. denotes mean arterial blood pressure.
‖ C.V.R. denotes cerebral vascular resistance.

Since only 1 of these 4 patients (McP.) became stuporous during the study, we cannot draw general conclusions. It appears, however, that cerebral vasospasm cannot be a consistent factor in causing this phenomenon.

3. *Reflex Depression of Cerebral Cortex by High Oxygen Tension.*—Anoxemia, by reflex action, stimulates the cerebral cortex as well as the vasomotor and respiratory centers. The restlessness and delirium associated with anoxemia are probably manifestations of this effect. Inhalation of high concentrations of oxygen may result in sudden withdrawal of this cortical stimulation and lead to coma. Suggestions of decreased ability of the brain to utilize oxygen, despite an abundant supply, are seen in the reduction in the cerebral metabolic rate for oxygen in patients W. McP. and W. A. during oxygen therapy (table 4). However, this change in cerebral oxygen consumption gives no clue whether it was caused by the narcotic effect of increased concentrations of carbon dioxide, withdrawal of reflex stimulation of the cortex or direct effects due to high tissue pO_2.

7. Baldwin, E.; Cournand, A., and Richards, D. W.: Medicine **28**: 201-237, 1949.
8. Taquini, A. C.; Fasciolo, J. C.; Suarez, J. R. E., and Chiodi, H.: Arch. Int. Med. **82**: 534-577 (Dec.) 1948.
9. Dripps, R. D., and Comroe, J. H., Jr.: Am. J. Physiol. **149**: 43-51, 1947.
10. Donald, K., and Christie, R. V.: Clin. Sc. **8**: 33-44, 1949.
11. Kety, S. S., and Wechsler, R. L.: Unpublished data.
12. Howarth, S.; McMichael, J., and Sharpey-Schafer, E. P.: Clin. Sc. **6**: 187-196, 1947. Godfrey, Pond and Wood.[5]

4. *Increased Cerebrospinal Fluid Pressure.*—Simpson [13] has reported that patients with severe, chronic emphysema may have papilledema, and Davies and Mackinnon [8] have noted increase in cerebrospinal fluid pressure in patients with cor pulmonale; the latter investigators observed that this pressure usually increased further during inhalation of oxygen. The mechanism by which increased intracranial pressure can produce coma is obscure unless it produces cerebral ischemia. Simultaneous measurements of cerebral blood flow, cerebral vascular resistance and intracranial pressure have not been made, but it is possible that the increased cerebrospinal fluid pressure is associated with and actually caused by cerebral vasodilatation due to retention of carbon dioxide. Davies and Mackinnon noted that inhalations of gas mixtures rich in carbon dioxide caused similar increase in intracranial pressure. If the rise in intracranial pressure is caused by vasodilatation, it may be merely an associated phenomenon and not the cause of the mental disturbance.

5. *Direct Depression of the Cerebral Cortex by High Oxygen Tension.*—Patients with chronic anoxemia may have alterations of a compensatory nature in cerebral metabolism. Sudden removal of these may lead to inability to utilize oxygen at normal or high pressures and consequent coma.[1] Barach observed similar reactions in patients with cerebral arteriosclerosis, who presumably did not have anoxemia or involvement of chemoreceptor reflexes; in these patients the first and third mechanisms (carbon dioxide narcosis and reflex depression of the cerebral cortex by high oxygen tension) cannot be operative. It would be of great interest to study cerebral blood flow and metabolism during oxygen therapy in patients with cerebral arteriosclerosis who do not have arterial oxygen anoxemia.

MANAGEMENT OF PATIENTS WITH CHRONIC ANOXEMIA

The management of patients with chronic anoxemia must remain empiric until the cause of the reaction is learned. Barach has expressed his belief that coma may be prevented if a low concentration of oxygen (30 per cent) is used to begin therapy and higher concentrations are employed later if required. In our experience 100 per cent oxygen is seldom needed to relieve anoxemia in patients with chronic emphysema. If abnormally high blood oxygen tension should be an important factor in producing this reaction, administration of 100 per cent oxygen may constitute an overdose for these patients.

Since many patients with chronic anoxemia require oxygen therapy, and since there is no way of determining those in whom coma is likely to develop, it appears best to follow Barach's regimen. Even then we would advise careful, repeated examination of these patients for at least the first three hours of oxygen therapy for signs of developing coma. Some patients, relieved of dyspnea by oxygen therapy, may simply fall asleep and can be aroused readily; oxygen therapy should not be discontinued on this account. If true cortical depression develops, it may still be considered proper to continue oxygen therapy, particularly if serious cardiac failure is present. In Barach's experience mental depression usually disappears with continued treatment; this occurred in 1 of our cases.

However, the physician must remember that an emphysematous patient with chronic anoxemia is in a precarious state if he becomes unconscious as a result of oxygen therapy. Respiration is then shallow, secretions cannot be coughed up and atelectasis is especially likely to occur because the alveoli are filled with readily absorbed oxygen. Such a patient should have continuous nursing care, prophylactic chemotherapy and possibly bronchoscopic drainage to prevent serious pulmonary complications.

13. Simpson, T.: Brit. M. J. 2:639-641, 1948.

SUMMARY

In 1 patient with pulmonary insufficiency due to emphysema oxygen therapy was followed by coma and eventual death.

In a group of 65 patients with chronic anoxemia, mental changes occurred in 8 when high concentrations of oxygen were inhaled; none of them died. The possible mechanisms responsible for these reactions are discussed.

ABSTRACT OF DISCUSSION

DR. ALVAN L. BARACH, New York: Coma resulting from oxygen therapy in patients with preexisting chronic arterial anoxia is generally preventable. In patients with pulmonary emphysema and anoxia, sudden exposure to a concentration of 40 or 50 per cent oxygen leads to delirious and comatose states within one to twelve hours. However, controlled administration of gradually increased concentrations of oxygen does not result in either delirium or coma. The nasal catheter is used in patients of this type at an oxygen flow of 1 liter per minute, increased every other day or every three days by 1 liter per minute to 7 liters per minute. Then 40 to 50 per cent oxygen may be given in a tent if desired. Furthermore, when patients are given oxygen in this way, gradually, the arterial carbon dioxide content may increase to 100 to 120 volumes per cent without symptoms, since the p_H is normal. These patients are well and are not comatose. It is evident, therefore, that it is not simply elevation of the carbon dioxide level that causes coma. I have seen irrationality take place in a patient whose arterial carbon dioxide concentration rose only to 70 volumes per cent when oxygen was administered suddenly in high concentration, but the p_H fell to 7.2. Thus, patients may have a carbon dioxide content of twice normal, with their equilibrium undisturbed as long as respiratory acidosis is not produced. It is also of interest that patients who improve while receiving oxygen will show a gradual decrease in arterial carbon dioxide content as the lungs diffuse oxygen and carbon dioxide more readily. The increase in carbon dioxide content of arterial blood and alveolar air is also a homeostatic mechanism. Patients with a pulmonary ventilation of 12 liters per minute, breathing air, may gradually manifest a pulmonary ventilation with oxygen of 6 liters per minute, in which case their basal carbon dioxide output, about 300 cc. per minute, is exhaled in a volume of 6 liters per minute rather than in a volume of 12 liters per minute. This enables them to eliminate carbon dioxide which otherwise would produce increasing acidosis. In 1921 Margaret Woodwell and I reported cases of shallow breathing in which the carbon dioxide content rose from 50 to 88 per cent in two hours and respiratory acidosis took place. There was not time enough to excrete chlorides. Respiratory acidosis does take place in patients who are given high concentrations of oxygen suddenly, as is occasionally necessary for acute severe anoxia. For most patients with chronic pulmonary emphysema the therapeutic situation is best handled by a gradual increase in the concentration of oxygen inhaled, which results in gradual increase in the amount of carbon dioxide in the blood and a correspondingly higher elimination of carbon dioxide per breath, increased elimination of chlorides, retention of base and avoidance of respiratory acidosis. It is more physiologic to think of the therapeutic use of oxygen as a method of relieving dyspnea by reducing the pulmonary ventilation toward the normal and only in rare circumstances to consider oxygen an agent that depresses respiration below the normal. When the volume of breathing is excessively lowered by oxygen—and high concentrations are required to combat severe anoxia—artificial ventilation may be used to prevent respiratory acidosis. When it is possible to prescribe oxygen in the manner outlined, the harmful consequences of abrupt

administration of high oxygen atmospheres, i. e., coma, respiratory acidosis and delirium, can be avoided.

DR. STANLEY J. SARNOFF, Boston: An experience in Boston in my opinion confirms Dr. Comroe's interpretation of the events that occur in patients with pulmonary emphysema. A patient at the Children's Hospital, a hemophiliac who had been hit on the head with a baseball and had had an intracranial hemorrhage with complete paralysis, was in a chest respirator, which was effecting a minute volume of only 0.5 liter, 500 cc. or less, per minute. The patient had an endotracheal tube and was receiving 100 per cent oxygen at the time. The patient was pink, and on determination the partial pressure of arterial oxygen proved to be over 200 mm. of mercury. The patient was unconscious. I was called to see him with the view toward producing more adequate respiration by means of electrical stimulation of the phrenic nerve. The point made by Dr. Comroe needs emphasis, because there is a widespread misapprehension that the determination of the arterial oxygen level is a measure of the adequacy of the respiratory effort. This is obviously not so. The degree of oxygenation of the blood does not indicate whether carbon dioxide secretion is adequate, especially when oxygen is being administered. In this patient, who had a minute volume of 500 cc. per minute, which is certainly inadequate, the arterial oxygen saturation by virtue of the 100 per cent oxygen he was receiving was well above normal limits. Nevertheless, the carbon dioxide was 115 mm. of mercury, and his blood p_H was 7.06, a severe respiratory acidosis. When adequate respiratory effort (5 liters per minute) was produced by electrical stimulation of the phrenic nerve the carbon dioxide fell to 55 mm. of mercury in seven minutes and to 50 mm. in twenty minutes. It cannot be overemphasized that the exchange of oxygen and carbon dioxide in the absence of adequate ventilative efforts has been susceptible of widespread misapprehension and that the only effective manner of removing carbon dioxide is adequate ventilative effort. The same, of course, is not true of oxygenation of the blood, as shown by the recent work of Draper, Whitehead and their co-workers.

DR. JULIUS H. COMROE JR., Philadelphia: The dangers in oxygen therapy are difficult to evaluate because oxygen is often administered to dying patients and one cannot always say with certainty whether the patient died in spite of or because of it. Dr. Barach is correct in stating that some patients will eventually come out of the comatose state, even though administration of oxygen is continued; this has been confirmed in our study. We still do not know whether the mental changes observed are due to carbon dioxide narcosis, but we do advise against the routine administration of 7 or 10 per cent carbon dioxide mixtures to patients who have depressed breathing. A comatose patient must receive excellent nursing and medical care; this is especially important in patients with emphysema, since they may have pronounced reduction in pulmonary function at the outset.

Definition of a Virus.—There is no universally accepted definition of a virus; the one I prefer is that a virus is a parasitic micro-organism considerably smaller than most bacteria, which is capable of multiplication only within living susceptible host cells. This definition is elastic enough to allow one to include or exclude the rickettsiae and psittacosis-type organisms as circumstances require! As they appear to be intermediates between bacteria and "true" viruses, one must expect to find it necessary to seek analogies sometimes in one group, sometimes in the other. The time has passed, at least in the case of the animal viruses, when it was necessary to withhold the term organism from a virus. It is now some years since anyone has seriously spoken of viruses as nonliving protein molecules. The crux of the definition is the limitation of virus growth to the interior of the susceptible cell. This restriction determines the general form of the techniques that must be used in experimental virology. Instead of the bacteriological medium in test tube or petri dish we have the mouse brain or the cavities of the developing chick embryo as the standard substrates for virus multiplication in the laboratory.—F. M. Burnet, The General Pathology of Virus Infections, *The Lancet*, June 10, 1950.

BCG

ROBERT J. ANDERSON, M.D.
and
CARROLL E. PALMER, M.D.
Washington, D. C.

Tuberculosis has become somewhat of an emergency in many areas of the world, particularly in those countries directly affected by World War II. A multitude of shortages has made it impossible to employ the usual tuberculosis control measures. As a result, a simple procedure like BCG vaccination has a strong appeal, and that appeal grows stronger each day that the harmlessness of the vaccine is reiterated. The adoption of BCG vaccination programs under those conditions is understandable, and it is also understandable that similar appeal should be felt in those areas which, although not devastated by war, have been forced to view their tuberculosis problem with a certain resignation, if not hopelessness. It appears that these circumstances, rather than any recent demonstration of the vaccine's value in the prevention of tuberculosis, have given rise to the vast worldwide BCG programs now under way.

There is doubtless justification for these programs, for emergency situations demand emergency action. If BCG vaccination materially assists in the control of tuberculosis, enormous gains may have been made; if not, relatively little has been lost, at least in the highly infected areas where most of the programs have been instituted. On the other hand, we cannot view the justification of these programs as an argument to be blithely accepted for the widespread use of BCG in the United States.

Perhaps the most impartial statement that can be made about BCG is that the controversy about vaccination has not been resolved by the research and extensive clinical application to which it has been subjected in recent years. We must face the fact that the postwar increase in the volume of literature on the subject is not a reflection of the solution of basic issues which have been a matter of debate for a quarter of a century. The pros and cons of today do not differ materially from those of yesterday, although the proponents now can point to a much more extensive use of the vaccine as an indication of "general acceptance" and can produce more satisfactory evidence of its protective value and safety.

NATURE OF THE VACCINE

It must be recognized and admitted, however, that we have a woefully incomplete knowledge of just what it is that is being used as BCG. The vaccine is defined as a suspension of living tubercle bacilli derived from a bovine strain which has been attenuated to the point where it is unable to produce progressive disease. To that rather vague definition several decades of study have made but little factual addition to our knowledge of the actual character of the vaccine. If we may judge from published reports, even the most cursory examination of the problem reveals a wide discrepancy between the progress of concrete knowledge about BCG on one hand and the evolution of vaccination programs and the creation of policy and legislation on the other.

Read by Dr. Anderson at the Annual Meeting of the National Tuberculosis Association, Medical and Public Health Sections, April 25, 1950.

From the United States Public Health Service, Division of Tuberculosis; Medical Director, Chief (Dr. Anderson); Medical Director, Chief, Field Studies Branch (Dr. Palmer).

Nevertheless, the general acceptance of BCG vaccination throughout the world has been enormously accelerated since the end of the war. It is reasonable to anticipate a growing desire in the United States to institute mass BCG vaccination programs, regardless of the existing gaps in our knowledge. It would be unfortunate if this desire were to be stimulated by the thought that licensing of the vaccine would indicate a recommendation for wide use. It must be remembered that licensure of a biologic preparation does not necessarily attest to its effectiveness or usefulness. With respect to BCG, in view of the questions that still exist, licensure would mean only that the vaccine had been found safe by trial with animals, that it is free from contaminating substances and that it will produce a satisfactory reaction in animals and human beings. Licensure would not constitute an official stamp of approval as to its value as a preventive. In the event of an uncontrolled distribution of the vaccine, it is only realistic to presume that indiscriminate programs might spring up under a variety of jurisdictions throughout the country and might cover large, undefined segments of the population. This would be unfortunate, because a great deal of further research in the bacteriologic and public health aspects of the problem is necessary. The scope of such programs might reach hundreds of thousands of injections. Such unobjective application could blot out for years any possibility of obtaining information vitally necessary to sound public health practice.

The questions which still exist are by no means trivial, nor are they limited to the realm of theoretic consideration. Bacteriologists have pointed out that there is little uniformity in the number of viable organisms in the several vaccines now being produced, as well as in different lots of the same vaccine. Moreover, there is little knowledge as to how many are viable at any given time, and the significance of the nonviable organisms remains problematic. Still less is known about the number or proportion of viable organisms required in the injected dose. Certain dosages are recommended, but the question of an optimal or minimal amount necessary to produce the conversion of the tuberculin reaction is still under investigation. Since we are dealing with a vaccine of living organisms, and since we presume that we are depending on the multiplication of those organisms for the desired effect, we are obliged to have some knowledge of their physiologic condition, their numbers and their survival rate before even a tentative standardization can be said to exist.

The Public Health Service is conducting extensive controlled studies to determine under what conditions BCG vaccine should be used, how it should be applied and what its effectiveness actually is. There is little real information about the clinical effect produced by the variations among individual lots of vaccine and by the differences among vaccines from different manufacturers. There are competent experts who go so far as to maintain that BCG is too variable in potency even to warrant trial in human beings. At the same time, there are those who consider that BCG is the answer to the whole tuberculosis problem. The Public Health Service is going forward with its investigations in the belief that products actually being used, although not yet standardized, should be tested and compared to determine what standardization is desirable. This last problem alone is the subject of extensive studies being conducted by the Public Health Service among 20,000 persons. Three American and two European products are being compared in these studies.

Even the life of the vaccine is a matter of conjecture, and at the present time the recommendations of producers vary from five to fourteen days. At all events, if liquid BCG vaccine were licensed today it would be the most unstable vaccine so licensed in the United States, and it seems appropriate to mention that there is always the possibility that the reputation of all BCG vaccines will suffer because of the inadequacies of individual batches. It is hoped that a dried product will provide a much greater lasting quality. This could resolve many perplexing difficulties. Some of our studies have therefore compared two dried vaccines against each other and against five different fresh vaccines. The results have not been encouraging, since the percentage of tuberculin conversions produced by the dried products was considerably below that obtained with any of the fresh products.

TUBERCULIN TEST EVALUATION

Looking next to the indications for use, we are at once confronted by the engima of the tuberculin test, which provides the basis for selection of those persons eligible for vaccination. Indeed, the variations in antigen used, in dosage and in interpretation, undoubtedly produce wide discrepancies in selection of eligible persons. They may account, too, for the many discrepancies in the ultimate observations as to the effect of the vaccine in converting persons from nonreactors to reactors, which is the only criterion we have for measuring the success of vaccination. These factors certainly affect the comparability of the results reported by different workers.

Consider the change in criteria for eligibility for vaccination that has occurred in the past two years. Almost arbitrarily the tuberculin dosage employed in the prevaccination test in the European BCG program has been reduced tenfold. General agreement to proceed similarly in this country was reached in an equally arbitrary way at the meeting of the Public Health Service BCG advisory group in March 1948. It is symptomatic of the general uncertainty about the utility of BCG that these changes were made on the basis of little evidence as to their favorable or unfavorable effects. Persons are now being vaccinated who only a few years ago would have been turned away and told that they had a naturally acquired immunity.

Three years ago we conducted a vaccination program among school children in a southern community. The tuberculin criteria in use at that time found 64 per cent of the children ineligible for vaccination, whereas the current criteria would have found less than 15 per cent ineligible. It is obvious that we do not know whether the many additional children would have benefited from vaccination. The important point is that little is known as to what the appropriate tuberculin criteria are for selecting persons for vaccination.

Furthermore, one should know not only who can benefit but also who can be vaccinated without excessive adverse reaction. Our primary effort following our first experience with BCG vaccination was to study the relative incidence of adverse lesions among persons of different prevaccination tuberculin sensitivity. Although the local inflammation from vaccination is severer but

of shorter duration among tuberculin reactors than nonreactors, the frequency and character of the local lesions among those who react only to the large dose (0.002 mg. purified protein derivative) are considered quite tolerable.

There is even more uncertainty about what constitutes a successful vaccination than about who should be vaccinated. Although there is much debate on the degree of association between allergy and immunity, for want of a better indicator, tuberculin allergy is the current measure of the relative success of various vaccines and technics. Yet we must admit that there is a possibility that two vaccines producing comparable tuberculin allergy would differ significantly in the immunologic protection provided.

DURATION OF IMMUNITY

The sensitivity induced by BCG vaccination is usually not like that which is attributed to natural infection. Lower tuberculin dosages fail to detect sensitivity in a substantial proportion of vaccinated patients, and the reactions among those given the larger dose of tuberculin are ill defined in many instances. It appears that one has to employ the most liberal criteria for what constitutes a definite reaction in order to report much above 90 per cent conversions from BCG vaccination.

When we use the commonly employed 5 mm. of induration as a criterion, we have frequently obtained much less than 90 per cent conversions, in contrast with the greater conversions reported by others, which sometimes are as much as 98 or 99 per cent. In comparing our observations with those of other American workers it is possible that our use of 0.002 instead of 0.005 mg. purified protein derivative, with readings made at seventy-two hours instead of forty-eight, may account in part for some of the discrepancy. The disagreement between our results and those reported by some European workers must arise completely from other causes, however, since our technical procedures were identical with those used in Europe.

We had some doubt concerning the comparability of our own tuberculin test interpretations and those of other workers. Therefore we conducted comparative reading programs between members of our staff and three BCG experts. We found that one visiting reader reported more reactions, one about the same number and one some fewer than our readers, when observing the same group of persons. Thus, in the circumstances of this trial we were not able to explain, by this means, the discrepancies between our tuberculin results and those reported by others.

It seems that whether or not the experts agree on what is a reactor or what is the proper dosage of tuberculin, there remains a tremendous research problem to assess the meaning of the reactions of all degrees in terms of immunity. It is remarkable that little has been published on this subject despite the vast amount of BCG work that has been done.

Another aspect of BCG administration that troubles us is an apparent discrepancy about the continued effect of the vaccine. It has been said that the protective value of BCG lasts for several years and that this is evidenced by a persistence in the acquired tuberculin allergy. There is good evidence that the degree of allergy produced can wane rapidly. Consider the current experience in one of our community programs, where a preliminary sample of children tested both at six months and three years after multiple puncture vaccination shows that prevalence of sensitivity to 0.0001 mg. purified protein derivative has dropped from 43 per cent to only 12 per cent. Among those who did react six months after vaccination, less than one fourth still react three years later. There is more than twice as much persistence of the allergy among the Negro children as among the white.

METHODS OF ADMINISTRATION

There is considerable disagreement among the experts on the most efficacious method for administering BCG. We have investigated the relative merits of the intradermal and multiple puncture methods. It is clear that the latter is a more innocuous technic, but the former has appeared in each of our trials to be more efficient in producing allergy. For example, using the sensitivity to the intermediate dose (0.0002 mg. purified protein derivative) as a discriminating criterion, we observed a conversion rate of 82 per cent in those receiving vaccine intradermally, whereas the rate was only 56 per cent among those vaccinated by multiple puncture. These results were obtained in a group of 400 mentally ill patients tested seven weeks after vaccination.

It is appropriate to mention at this point that it appears unlikely that BCG can play an immediate, significant role in the control of tuberculosis in most mental and penal institutions. This follows from the exceptionally high degree of tuberculinization of the population of these institutions. A survey of 12,000 patients in seven mental hospitals showed 89 per cent reactors to the intermediate dose of tuberculin (0.0002 mg. purified protein derivative). In three penal institutions for adults the prevalence of sensitivity to this dose was 81 per cent, in 4,000 persons tested. In institutions for the mentally defective there appears to be limited possibility for general use of BCG. In three such institutions the prevalence of tuberculin sensitivity was 71 per cent among 5,500 persons tested. A program of vaccinating nonreactors on entrance into the mental and penal institutions could result eventually in the vaccination of a larger segment of the institutional population, especially in the institutions for the mentally defective, where the prevalence of sensitivity among recent entrants was about 20 per cent.

CLINICAL EFFECTIVENESS

One of the controversies among the BCG technologists pertains to the question of detection of postvaccination allergy. It is said that the allergy is revealed more frequently with old tuberculin than with purified protein derivative. We have made a number of trials involving the use of the antigens simultaneously and find no support for this contention. Actually, in a recent test on approximately 600 young men in two penal institutions, seven weeks after vaccination it was found that fewer reactors (75 per cent) were discovered with 0.1 mg. old tuberculin than with 0.0002 mg. purified protein derivative (81 per cent). The simultaneous readings of two consultant experts confirmed this observation.

In view of the attitude toward BCG vaccination which has been maintained in this country for so many years, it appears that we have something of an obligation to answer our own questions and to prove, before it is too late, just what this vaccine could do in our popula-

tion. We have before us examples in at least two countries where BCG vaccination has been carried on for many years, yet where no scientifically reliable data can now be obtained as to what part BCG vaccination has played in the history of tuberculosis in the country as a whole.

We cannot give unqualified credence to the belief that a general or decided decline in tuberculosis morbidity and mortality in France or Denmark or any other country where BCG has been used constitutes evidence that BCG vaccination was effective. Consider the precipitous decline in tuberculosis mortality in Iceland from 1930 to 1945 without the use of BCG, which was reported by Sigurdsson and Hjaltested[1] in *Public Health Reports* several years ago. The death rate fell from more than 200 per 100,000 to less than 70 per 100,000 in fifteen years. A personal communication from Dr. Sigurdsson indicates that the rate has dropped further to 34 per 100,000 in 1948. If a broad usage of BCG vaccination had been instituted at the beginning or during those fifteen years, there would be many who would cite the decline in mortality as unassailable evidence of the value of BCG. The Iceland experience, as well as many in this country, demonstrates that currently accepted methods of tuberculosis control should be prosecuted vigorously in all areas where there is an impulse to substitute BCG vaccination therefor.

EVALUATION PROGRAMS

Contrariwise, it is our express purpose to try to secure sound information on the extent to which BCG vaccination should be used in future generations. Our progress in this direction is definite but limited. We have three large evaluation programs under way. The first was established in 1947 among 11,000 school children of Columbus, Ga. This investigation was extended this spring to the entire adult community, so that the study will involve nearly 75,000 persons. Our second evaluation study was developed cooperatively last year with the Bureau of Indian Affairs. More than 30,000 Indian children were reached. The third and potentially the largest project consists of the cooperative program launched last autumn with the Department of Health in Puerto Rico. The entire school system is included in the program, and efforts will be made to include preschool children this summer.

We may be asked, "Will not these programs suffice to provide the evaluation and to answer all the questions about BCG?" We can say that they are substantial steps of progress, but there is need for additional opportunities for research. There will be sufficient questions about the general applicability of the Indian and Puerto Rican programs to warrant supplementary investigations in our own cities. The Columbus, Ga., program is a prototype and will not be adequate by itself. That is why we urge that the use of BCG vaccine in this country be conducted in a manner that will contribute to the knowledge about BCG or at least will not preclude the possibility of achieving the necessary goals. Perhaps the most significant justification for this position lies in the conviction held by many of us that tremendous improvement in vaccines and immunization procedures may be expected in the next few years.

A procedure which results in the production of tuberculin sensitivity presents certain unique problems in a country such as ours, with its predominantly nonreacting population. A mass program, in this case, would be directed in the quantitative sense chiefly toward those areas, such as parts of the Middle West, where tuberculin reactors are known to be less than 10 per cent in the teen-age group. Do we want to produce a tuberculin-sensitive population in an area that already is approaching the goal of any tuberculosis control program, i. e., a population entirely free of infection and disease?

The obvious alternative proposal is the vaccination of "exposed" groups, which, in most circumstances, literally means vaccinating where the least number of persons eligible for vaccination can be found. This presupposes a boundary line of group eligibility, and for all the world's experience there is scant evidence on which to base a determination of where that boundary line should be.

At all events, most of this complex and challenging phase of medical research lies before and not behind us. It would seem advisable at this time to bend our efforts toward achieving the minimal requirements of standardization and evaluation. Until this is accomplished, or at least until authoritative opinion can agree on a working compromise, any official public health agency which considers making specific recommendations for a vaccination program in this country faces a major decision.

SUMMARY AND CONCLUSION

In view of the gaps in our knowledge of the subject and in view of the disagreement among authorities as to the significance of those gaps, it is difficult to formulate well defined recommendations for the use of BCG vaccine in this country. We feel that mass vaccination programs are warranted only for carefully documented evaluation studies. Otherwise, the most that can be suggested at this time is its use in selected groups in which known exposure exists. Such projects should be designed with the possibility of contributing to our knowledge of the subject or at least of avoiding interference with studies now under way or proposed. Should the vaccine become generally available through licensure, it is apparent that those who will make decisions, even regarding the limited use of BCG, will face many perplexing responsibilities.

Our purpose in saying all this is to point out the danger of oversimplifying a problem that faces all of us collectively and may well face some physicians individually in the future, if not now. Between the one extreme of opposition to any use of BCG and the other of being evangelistic about it, there must be a rational middle ground where we can be reasonably sure that we know what we are talking about.

Perhaps some day we shall have a better understanding of the entire subject of immunization against tuberculosis. Certainly it is reasonable to anticipate the development of a better vaccine. But even with an improved product there will be problems of which groups to vaccinate, how to vaccinate and whether and when to revaccinate.

Whatever the use of BCG vaccination, however, no one should place reliance in it to the extent of relaxing the prosecution of accepted tuberculosis control methods for the protection of the community and the individual.

1. Sigurdsson, S., and Hjaltested, O. P.: Pub. Health Rep. 62: 1393, 1947.

DIGITOXIN CAUSING VENTRICULAR TACHYCARDIA WITH PERIPHERAL VASCULAR COLLAPSE

Report of an Unusual Case

RUDOLPH E. FREMONT, M.D.
and
HERBERT KING, M.D.
Staten Island, N. Y.

The widespread use of digitoxin in this country is undoubtedly due to its advantages, so convincingly demonstrated by Gold and associates,[1] of (1) rapid and almost complete absorption from the gastrointestinal tract, (2) insignificant systemic toxicity in terms of nausea and vomiting and (3) resultant ease with which it lends itself to rapid digitalization with multiple or single oral dosage.

The possibility of cardiac toxicity, however, appears to be insufficiently emphasized by those advocating use of digitoxin for rapid single dose digitalization. Their only recently repeated recommendation[1c] that "an average full digitalizing dose of 1.2 mg. may be *safely* given *at one time* to patients who have not recently had digitalis" (italics ours) makes no allowance for the possibility of serious cardiac toxicity. Reports on the toxic effects of digitoxin on the heart by other observers[2] have only recently made their appearance in the literature. We should like to add our own observation of the alarming and near fatal nature of an instance of ventricular tachycardia following the use of a single oral dose of 0.6 mg. digitoxin.

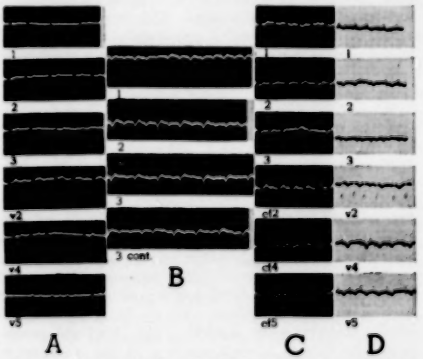
REPORT OF CASE

A white man aged 57 was hospitalized because of breathlessness of many years' duration. He had been an anthracite miner for ten years until seventeen years ago. Fifteen years ago he first noted labored breathing, which during the past three years became increasingly severe, occurring on minimal exertion. A chronic cough, present for many years, had become productive in the past year of approximately an ounce of watery sputum a day containing sootlike particles. For two years the patient had noted occasional irregularity in the heart action and had taken occasional doses of digitalis, amounting to not more than two or three tablets (200 to 300 mg.) a week; he had none for several weeks before hospitalization. There was no history of swelling of the legs or of precordial pain.

The patient was a rather slight (124 pounds [56.2 Kg.]) middle-aged man who was comfortable at rest but became dyspneic and cyanotic with minimal effort. The temperature was normal. The pulse was totally irregular but only a little accelerated. The blood pressure measured 140 mm. of mercury systolic and 74 mm. diastolic. Head and neck were normal, and cervical veins were not distended. The anteroposterior diameter of the chest was almost equal to the lateral diameter. Respiratory excursions were limited. The lungs were hyperresonant; breath sounds and voice sounds were diminished, and there was a moderate number of moist rales at the bases of both lungs posteriorly. Heart size could not be determined by percussion; there were no murmurs; the second pulmonic and second aortic sounds were of equal intensity. The liver could not be felt. The fingers were slightly clubbed. There was no subcutaneous edema.

Examination of the blood revealed 14.9 Gm. of hemoglobin per hundred cubic centimeters of blood and 11,200 white cells per cubic millimeter, with 69 per cent neutrophils and 31 per cent lymphocytes. Specific gravity of the urine was 1.017, and it contained a trace of albumin and occasional hyaline and granular casts. The reaction of the blood to the Kahn test was negative. The electrocardiogram (*A* of the illustration) disclosed auricular fibrillation with an average ventricular response of approximately 90 per minute, moderately low voltage of the QRS complexes in the standard limb leads, isoelectric T wave in lead 1 and low voltage of QRS complexes in precordial leads V_4 and V_5. Unipolar limb leads suggested a semivertical heart. Roentgenographic examination of the chest revealed advanced emphysema throughout both lung fields with large bullae and several air-fluid levels. The heart was at the upper limit of normal in size. The pulmonary artery segment was prominent.

Although the patient had a decidedly reduced ventilatory capacity due to anthrosilicosis with fibrosis, emphysema and secondary infection, he seemed reasonably comfortable during the first five days of hospitalization. On the sixth day he became more dyspneic and was found to have an apical rate of 124 with a pulse deficit of 20. The circulation time from arm to tongue, measured with sodium dehydrocholate, was 27 seconds. Oxygen was administered, and 0.5 Gm. aminophylline was given intravenously.



Electrocardiograms: *A* (May 11, 1949), showing auricular fibrillation with an average ventricular rate of 90, low voltage of QRS in limb leads and leads V_4 and V_5; low to diphasic T waves in leads 1, 2 and V_5; *B* (May 18), one and one-half hours after a single oral dose of 0.6 mg. digitoxin; see description in text; *C* (one and a half hours later than *B*), showing return of auricular fibrillation with an average ventricular rate of 150 and decidedly diphasic T waves in leads 1 and cf4 and cf5, and *D* (May 30, 1949) auricular fibrillation with persistently rapid ventricular rate of about 130; T waves are now inverted in all leads.

At 8 p. m. of the same day the patient received a dose of 0.6 mg. of digitoxin by mouth. At 9:30 p. m. he was found to be severely dyspneic and stuporous. The extremities were cold and the skin mottled. Blood pressure was unobtainable. Auscultation now revealed a regular tachycardia with a rate of 160. This rhythm was demonstrated electrocardiographically (*B* of the illustration) to be a ventricular tachycardia with bizarre ventricular complexes showing irregular but persistent alternation in form, amplitude and direction.

The patient appeared to be dying. At 10:20 p. m. he was given 150 mg. of quinine dihydrochloride by slow intravenous injection; after this measure the pulse became slower and again irregular. At 11 p. m. an electrocardiogram (*C* of the illustration) showed auricular fibrillation with an average ventricular rate of 150. The ventricular complexes had resumed their original appearance. Since the signs of peripheral vascular

From the Cardiovascular Section of the Medical Service of Halloran Veterans Administration Hospital.

Sponsored by the Veterans Administration and published with approval of the Chief Medical Director. The statements and conclusions published by the authors are a result of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

1. (*a*) Gold, H.; Kwit, H. T.; Catell, M., and Travell, J.: Studies on Purified Digitalis Glycosides: IV. The Single Dose Method of Digitalization, J. A. M. A. **119**:928 (July 18) 1942. (*b*) Gold, H.: Treatment of Cardiac Failure with Digitalis Glycosides, Mod. Concepts Cardiovasc. Dis. **14**:11, 1945; Pharmacological Basis of Cardiac Therapy, J. A. M. A. **132**:547 (Nov. 9) 1946. (*c*) Gold, H., and others: A System for the Routine Treatment of the Failing Heart, Am. J. Med. **3**:663, 1947.

2. (*a*) Levine, H. D.: Abnormal Rapid Rhythms Associated with Digitoxin Therapy, Ann. Int. Med. **29**:822, 1948. (*b*) Master, A. M.: Digitoxin Intoxication, J. A. M. A. **137**:531 (June 5) 1948. (*c*) Stone, J.: Auricular Tachycardia and Auricule-Ventricular Dissociation Following 1.2 Mg. Digitoxin in One Dose, J. Mt. Sinai Hosp. **14**:924, 1948.

collapse persisted (with the diastolic blood pressure remaining unobtainable and the systolic measuring only 90 mm.), 250 cc. of plasma was infused. This resulted in a gradual return of the blood pressure to normal levels and the continued clinical improvement of the patient except that the apical rate persisted between 110 and 150.

For this reason, twelve days after the paroxysm of ventricular tachycardia it was decided to digitalize the patient. He was given 0.25 mg. digoxin twice a day for three days. The apical rate then slowed to 100. He continued to receive 0.25 mg. daily with further slowing of the rate to between 60 and 80. Dyspnea was diminished by the inhalation of isopropylarterenol hydrochloride (isuprel hydrochloride®) mist. However, the patient remained incapable of more than minimal exertion. He was eventually discharged from the hospital, maintaining an adequately slow ventricular rate on 0.25 mg. digoxin daily and having attained a more satisfactory degree of cardiac and pulmonary reserve.

COMMENT

Occurrence of Toxic Arrhythmias with Digitoxin.—There can be no doubt that the digitoxin administered to the patient was responsible for the ensuing severe arrhythmia. It is particularly noteworthy that the dose used was neither excessive nor even optimal, according to the now common practice of single dose digitalization with digitoxin. It was merely the first dose of a rapid multiple dose schedule planned for the patient. It is realized that such toxic arrhythmias are also produced by digitalis leaf, and pertinent reports were particularly frequent [3] in the decade following the introduction of Eggleston's method of rapid digitalization. It appears that we are now entering a similar phase of experience with regard to digitoxin.

Flaxman [4] recently reported 30 cases of cardiac arrhythmias precipitated by digitoxin and emphasized that this high incidence occurred in a relatively short period of thirteen months; he had only occasionally observed arrhythmias due to digitalis leaf in the preceding fifteen years.

Levine's recent publication,[3a] on the other hand, tends to convey the impression that although toxic arrhythmias occur more frequently with digitoxin than with digitalis leaf this difference is statistically not significant. He emphasized that digitoxin in contrast to digitalis leads to the insidious onset of arrhythmias, i. e., without preceding symptoms of systemic toxicity. This was also true in about 66 per cent of the patients observed by Flaxman.[4]

Type of Arrhythmia and Mechanism.—The arrhythmia in the case reported herein is unusual for several reasons. First, ventricular tachycardia is not a common arrhythmia, being found only once in 1,800 electrocardiograms.[5] It is not frequent among arrhythmias due to digitalis toxicity, although it forms a subject of frequent case reports.[6] In recent reports on digitoxin toxicity,[7] its incidence varies from 1 in 8 cases [2b] to 1 in 30 cases.[2a] But digitalis toxicity is most often responsible for the occurrence of paroxysms of ventricular tachycardia.[8] Of particular interest is the association of this arrhythmia with electrical alternans. Although this phenomenon is often seen with paroxysmal tachycardias [9] and may then be considered of less ominous significance,[9] the characteristics of the electrical alternans evident in our case are rather striking. They consist of a regular alternation of the ventricular complexes in form, amplitude and length of diastole as well as a more strikingly irregular alternation, which affects in addition the direction of the ventricular complexes (*B* of the illustration). This type of electrical alternans would seem to belong to categories *2* and *3* as classified by Scherf and Kisch.[10] The underlying mechanism must still be considered controversial. However, we are inclined to agree with these authors in assuming an abnormal stimulus formation in one center with abnormal and varying intraventricular conduction. The irregular variform nature of the ventricular complexes associated with this type of paroxysmal arrhythmia is almost characteristic for digitalis toxicity. Its incidence is much higher in patients treated with digitalis than in those untreated.[11] A similar variation of ventricular complexes is almost the rule in the analogous phenomenon of digitalis extrasystoles of ventricular origin.

Prevention of Ventricular Tachycardia.—We do not wish to engage in the controversy whether single dose digitalization is indicated as often as it is practiced nowadays. Indications based on the presence of "cardiac emergencies" vary with the definition of these. We have abandoned futile attempts to set up rigid criteria for the indications and to proceed with standard schemes of treatment, for we fully agree with Scherf and Boyd [11a] that "the digitalization of every new patient represents an experiment with an unknown outcome." This seems well illustrated by the case herein reported.

The fact that ventricular tachycardia need not be caused by excessive dosage of digitalis but may follow moderate and even small amounts of the drug has long been known; the condition is usually ascribed not to the effect of digitalis alone but rather to the diseased state of the myocardium, usually evident in such cases, and its resultant increased sensitivity to digitalis. This should warn against single dose digitalization of patients with cardiac disease, particularly with potent glycosides that are slowly excreted and cumulative in effect. Since it has been observed [6a] that arrhythmias precipitated by digitoxin need not be preceded by subjective manifestations of toxicity—usually but not invariably present with digitalis leaf—particular alertness is indicated when one gives digitoxin. Levine [2a] mentions certain warning signals such as a sudden increase in rate or the unexpected regularization of an irregular rhythm in patients receiving digitoxin. As Levine points out, these signs are not always present, and our case bears this out.

While we do not have complete data available at this time, we should like to emphasize further the need for particular alertness when rapidly digitalizing elderly cardiac patients with arteriosclerotic heart disease or with considerable renal impairment. In the first instance it is the extent of myocardial damage, often not too evident clinically, in the second instance the impaired excretion and the resultant abnormal accumulation of

3. (*a*) Luten, D.: Clinical Studies of Digitalis: III. Advanced Toxic Rhythms, Arch. Int. Med. **35**:87 (Jan.) 1925. (*b*) Marvin, H. M.: Paroxysmal Ventricular Tachycardia with Alternating Complexes Due to Digitalis Intoxication, Am. Heart J. **4**:21, 1928. Palmer, R. S., and White, P. D.: Paroxysmal Ventricular Tachycardia with Rhythmic Alternation in Direction of the Ventricular Complexes in the Electrocardiogram, ibid. **3**:454, 1928.

4. Flaxman, N.: Digitoxin Poisoning: Report of 30 Cases, Am. J. M. Sc. **216**:179, 1948.

5. Williams, C., and Ellis, L. B.: Ventricular Tachycardia: An Analysis of 36 Cases, Arch. Int. Med. **71**:137 (Feb.) 1943.

6. (*a*) Braun, S., and Wosika, P. H.: Bidirectional Paroxysmal Tachycardia; Toxicity of Different Cardiac Glycosides, Am. Heart J. **29**:26, 1945. (*b*) Curreri, J. H., and Woodard, R. C.: Ventricular Tachycardia with Electrical Alternans Resulting from Digitalis Excess, Ann. Int. Med. **26**:120, 1947. (*c*) Footnote 3.

7. Levine.[3a] Master.[2b] Flaxman.[4]

8. Footnote 3b. Braun and Wosika.[6a] Curreri and Woodard.[6b]

9. Kalter, H. H., and Grishman, A.: The Electrical Alternans, J. Mt. Sinai Hosp. **10**:459, 1943.

10. Scherf, D., and Kisch, F.: Ventricular Tachycardia with Variform Ventricular Complexes, Bull. New York M. Coll., Flower & Fifth Ave. Hosps. **2**:73, 1939.

11. (*a*) Scherf, D., and Boyd, L. J.: Cardiovascular Diseases, Philadelphia, J. B. Lippincott Company, 1947. (*b*) Schwarz, S. P., and Jesser, A.: Action of Quinine and Quinidine on Patients with Ventricular Tachycardia, Am. Heart J. **9**:792, 1934.

the drug, which make such patients particularly vulnerable to toxic effects of digitalis.

This point finds support in an analysis of the cases with digitoxin toxicity reported by others.[7] Thus, of Master's group [2b] of 6 patients with cardiac disease of known causation, 4 had arteriosclerotic or hypertensive heart disease and the remaining 2 had rheumatic heart disease with severe failure. Of Levine's [2a] series of 7 persons with cardiac disease, 1 was a patient aged 79 with arteriosclerotic heart disease; 2 had hypertensive heart disease with uremia, and 2 with rheumatic heart disease again had severe failure. The remaining 2 patients (1 with hypertension, the other with rheumatic heart disease) seemed unduly sensitive to digitoxin in small dosage but did well on receiving digitalis leaf. That such selective toxicity of a digitalis glycoside may exist is suggested by another recent report [8a] and may also have been the case with our patient.

Treatment.—Of all toxic arrhythmias due to digitalis, ventricular tachycardia is undoubtedly the most dangerous, and the therapeutic measures required may often prove equally hazardous.[11b] There are many cases of paroxysmal ventricular tachycardias that respond well to the oral administration of quinidine sulfate. It should be remembered that the usefulness of this drug outweighs its occasional untoward effects. If oral administration is impossible or rapid administration is demanded by the critical condition of the patient, especially when the paroxysm has led to peripheral circulatory failure, then either quinidine sulfate or quinine dihydrochloride, a drug similar in action but somewhat less potent, should be administered intravenously or intramuscularly. The danger of toxic effects on the already severely damaged heart is undoubtedly great, and cases of ventricular fibrillation and cardiac standstill have been described.[11b] Yet this risk must be taken. We were fortunate to be able to abolish the paroxysm in this patient with the moderate dose of 150 mg. of quinine dihydrochloride.

However, the peripheral vascular collapse did not disappear with the paroxysmal arrhythmia, and only the prompt administration of plasma seemed to overcome the collapse. The administration of plasma or whole blood would therefore seem an important method to be considered in the management of peripheral circulatory failure not only when associated with acute myocardial infarction, as recently demonstrated,[12] but also when precipitated by severe paroxysmal tachycardia.

After a considerable lapse of time, and urged by the persistent rapid ventricular rate, digitalization of the patient was resumed. In view of the unhappy experience with digitoxin, we redigitalized our patient with digoxin; reduction of the ventricular rate was accomplished in a slow but entirely satisfactory manner. Although this glycoside has not been frequently employed in this country, our use of it was prompted by the consideration of its rapid excretion and small tendency to cumulation.[13] This seemed important in view of the undue sensitivity of our patient. The additional advantages of rapid absorption from the gastrointestinal tract should make it an excellent glycoside for the rapid treatment of heart failure or auricular fibrillation due to arteriosclerotic heart disease and particularly following myocardial infarction. Although toxic arrhythmias including ventricular tachycardia may also occur with this glycoside, they can be expected and have actually been observed to disappear more rapidly.

12. Corday, E.; Bergman, H. C.; Schwartz, L. L.; Spritzler, R. J., and Prinzmetal, M.: Studies on the Coronary Circulation: IV. The Effect of Shock on the Heart and Its Treatment, Am. Heart J. **37**: 560, 1949. Sampson, J. J., and Singer, A. M.: Plasma and Blood Infusion Following Myocardial Infarction, ibid. **38**: 34, 1949.

13. Rose, O. A.; Batterman, R. C., and De Graff, A. C.: Clinical Studies on Digoxin, a Purified Digitalis Glycoside, Am. Heart J. **24**: 433, 1942. Eichna, L. W., and Taube, H.: A Comparison of the Actions of Four Cardiac Glycosides on a Patient with Congestive Heart Failure, ibid. **26**: 631, 1943.

SUMMARY

An instance of severe digitoxin toxicity is reported following a single oral dose of 0.6 mg. digitoxin; it consisted of a paroxysm of ventricular tachycardia with an unusual type of electrical alternans, followed by peripheral vascular collapse.

The paroxysm was abolished by the intravenous use of quinine dihydrochloride, but the collapse was overcome only with the help of plasma infusion.

The potent digitoxin glycoside should be used judiciously, particularly in elderly patients with arteriosclerotic heart disease and in those with renal failure. The preferential use of digoxin is suggested for such patients. Plasma or blood infusion is recommended for the treatment of shock precipitated by paroxysmal tachycardias.

PROPHYLAXIS OF PENILE CARCINOMA

ALAN R. BLEICH, M.D.
New York

The purpose of this paper is to establish the fact that penile carcinoma is a preventable disease. Evidence that prophylaxis can be established has long been demonstrated in the medical literature. It has been shown that smegma is a carcinogenic agent and, when harbored beneath the foreskin, can produce carcinoma of the penis. In addition there is indirect evidence that carcinoma of the cervix may have a similar origin.

INCIDENCE

The incidence of penile carcinoma has been variously estimated at from 2 to 5 per cent of all carcinoma in males in the United States and Great Britain. Ewell [1] states that the majority of cases occur when the patient is between 40 and 60 years of age; however, it is not uncommon before 40 years. Wolbarst [2] estimates that 225 Americans die annually of penile carcinoma, as do about 150 Britons in England and Wales. Lenowitz and Graham [3] estimate that it is five times as common among Negroes as among white persons. The incidence in the Orient is considerably higher, estimated at between 10 to 15 per cent of all cancers in men. Ngai [4] states that the average frequency of penile carcinoma in China is 18.3 per cent and in other Far Eastern countries 18.9 per cent. Spittel [5] mentions a high percentage of penile carcinoma in Ceylon, where he operated on 91 patients in four years. Maxwell's [6] figure for China is 15.8 per cent. Noble [7] gives a figure of 22 per cent of all cases of carcinoma in males in Siam. In the investigation of the statistical incidence of penile carcinoma among different national and racial groups an important fact emerges. This is

This study was aided by a grant from the Carson Foundation.

1. Ewell, G. H.: Epithelioma of the Penis, Wisconsin M. J. **37**: 809-814, 1938.

2. Wolbarst, A. L.: Circumcision and Penile Carcinoma, Lancet **1**: 150-153, 1932.

3. Lenowitz, H., and Graham, A. P.: Carcinoma of the Penis, J. Urol. **56**: 458-464, 1946.

4. Ngai, cited by Melicow and Ganem.[10]

5. Spittel, R. L.: Betel Chewing and Cancer, Brit. M. J. **2**: 632, 1923.

6. Maxwell, J. L.: Incidence of Malignant Disease in China, **49**: 462-465, 1929.

7. Noble, cited by Ewell.[1]

the rarity of penile carcinoma among the Jewish people and its relative infrequency among Mohammedans. Only 2 cases of carcinoma of the penis affecting Jews have been reported. The first case, reported by Wolbarst,[2] occurred in an uncircumcised Jew. Dean [8] has reported the only case of carcinoma in a circumcised Jew. This circumcision was performed eight days postnatally. At the age of 16 this man had a syphilitic lesion of the penis cauterized. At the age of 66 he had a histologically proved carcinoma of the penis. The external urethral meatus was narrowed, and Dean attributes the neoplasm to chronic irritation caused by urinary obstruction.

Wolbarst,[2] in combination with other authors, collected 1,103 cases of carcinoma of the penis in the United States but found no record of carcinoma in a circumcised Jew. (Dean's case had not been reported at that time.) Jews make up approximately 3 per cent of the population of the United States; therefore, there should have been 33 cases of penile carcinoma occurring in Jews. Actually there have been only 2 cases. Hoffman,[9] in Montreal, could find no case of carcinoma of the penis in a Jew. In Israel Yassky [9] reports no penile carcinoma in a Jew in 42,321 patients seen in the skin and venereal disease clinics.

The incidence of penile carcinoma among Mohammedans is considerably lower than that of neighboring groups. In this connection the accompanying table is of importance.

The figures in the table were collected by Wolbarst [2] by personal communication with the office of the Inspector General. They show a morbidity for penile carcinoma in these Indian hospitals of 15.6 per cent, compared to 2 to 3 per cent in Europe and the United States. The two predominant groups in these hospitals are Hindus and Mohammedans. As can be seen in the table, there is a decided difference in incidence of carcinoma affecting Mohammedans as compared with that affecting Hindus. In accordance with the Mohammedan faith, circumcision is practiced between the fourth and ninth years of life. Sutherland,[10] in a study of cancer admissions in the Mayo Hospital of Lahore in India, states, "A glance at the result of the race analysis shows a more or less equal prevalence of malignant disease among the two peoples (Hindus and Mohammedans) with one important exception. This exception is in the case of carcinoma, where the Hindu admissions exceed the Mohammedans by 80, a difference almost entirely due to 72 cases of epithelioma of the penis among Hindus, an affection from which Mohammedans (who practice circumcision) rarely suffer."

Megaw,[11] also reporting on Indian statistics, mentions 64 cases of penile carcinoma, of which only 2 occurred in Mohammedans. If the figures on the official table are combined with those of Sutherland [10] and Megaw [11] there are a total of 4,884 cases of carcinoma in males, of which 1,336 are cases of penile carcinoma. Of these cases, 1,303 occurred in Hindus, a percentage of 97.5. Twenty-six cases occurred in Mohammedans, a percentage of 2. The incidence of Mohammedan patients in these hospitals is 21.19 per cent. Therefore, if penile carcinoma occurred among Mohammedans equally as it occurs among Hindus, there would have been a total of 254 cases instead of the 26 cases actually reported. This difference in the incidence of penile carcinoma may be attributed to the practice of circumcision among the Mohammedans.

ETIOLOGY

James Ewing is quoted by Bessesen [12] as follows: "Cancer of the penis is unknown to the Jewish race, common in other races and obviously due to the irritation of decomposing smegma and infection." This general statement has been echoed by various authors, including Melicow and Ganem,[13] Dean,[14] Sorsby,[15] Wolbarst,[16] Whiteford [17] and Szevachovski.[18] These authors cite many cases to prove the contention that balanitis and balanoposthitis are the precursors to carcinoma of the penis. The irritating agent is smegma. This material is produced by the preputial glands of Tyson, which are found on the neck of the penis and inner layer of the prepuce. Their secretion, when mixed with discarded epithelial cells, is called smegma.

It has been demonstrated by Plaut and Kohn-Speyer [19] that smegma is a carcinogenic agent. Their work has been done on mice. An artificial sheath was constructed into which horse smegma was injected.

Incidence of Penile Carcinoma Among Mohammedans and Hindus in Hospitals in India

Hospital	Total Cases of Carcinoma in Men	Total Cases of Penile Carcinoma	Penile Carcinoma		Mohammedans in Hospitals (Percentage)
			Hindus	Mohammedans	
Madras Presidency and Madras City	5,322	921	907	14	9.8
Government of Bengal	1,792	117	109	4	16.0
Civil Hospital, Central Provinces	460	113	109	2	21.8
Civil Hospital, Assam	318	49	44	4	37.13
Total	7,892	1,200	1,169	24	21.19*

* Average

This material was used in lieu of human smegma because of the unavailability of the human material and because of the high rate of penile carcinoma among horses. The mice were divided into two groups, a control group which received injections of cerumen and the group receiving injections of smegma. No cancer was found at the site of injection in any mouse in the control group. In the other group four papillary warts were found at the site of injection of the smegma, three of which were cytologically regular while the fourth demonstrated carcinoma-like changes. In addition, two hornifying squamous cell carcinomas (one with metastases), one undifferentiated skin carcinoma and one spindle cell sarcoma with metastases were found. This neoplasia was found at the site of injection of the smegma in the artificially created skin sheath and conclusively demonstrated the carcinogenic quality of smegma. We may note in passing the possible con-

8. Dean, A. L., Jr.: Epithelioma of the Penis in a Jew Who Was Circumcised in Early Infancy, Tr. Am. A. Genito-Urin. Surgeons **29**: 493-499, 1936.
9. Cited by Wolbarst.[2]
10. Sutherland, D. W.: Statistics of Malignant Disease Admitted to the Mayo Hospital, Lahore, Punjab, India, from 1892 to 1903 Inclusive, Arch. Middlesex Hosp. **3**: 84-91, 1904.
11. Megaw, J. W. D.: Notes on the Prevalence of Malignant Disease in Bengal, Indian M. Gaz. **40**: 163-168, 1905.
12. Bessesen, D. H.: Circumcision and Cervical Carcinoma, M. J. & Rec. **125**: 490, 1927.
13. Melicow, M. M., and Ganem, E. J.: Cancerous and Precancerous Lesions of the Penis, J. Urol. **55**: 486-514, 1946.
14. Dean, A. L., Jr.: Epithelioma of the Penis, Arch. Surg. **18**: 1273-1279 (April) 1929.
15. Sorsby, M.: Cancer and Race; A Study of the Incidence of Cancer Among Jews, New York, William Wood & Company, 1931.
16. Wolbarst, A. L.: Does Circumcision in Infancy Protect Against Disease?, Virginia M. Monthly **60**: 723-728, 1934.
17. Whiteford, C. H.: A Case of Epithelioma of the Penis Following Incomplete Circumcision, Lancet **2**: 1304, 1920.
18. Szevachovski, P.: La rôle de la circoncision dans la prophlaxie du cancer pénien et de la syphilis, Thesis, Geneva, 1933.
19. Plaut, A., and Kohn-Speyer, A. C.: The Carcinogenic Action of Smegma, Science **105**: 391-392, 1947.

nection between smegma in this sheath and the incidence of cervical carcinoma in the human female.

The lack of cases of carcinoma of the penis among Jews has often been attributed to a racial factor. Similar statements have been made concerning the low incidence of cervical carcinoma among Jewish women. However, the incidence of carcinoma of other portions of the skin among Jews and gentiles is equivalent. Wolbarst [20] states, "The statistical studies of Billing, Fishberg, Hoffman and others have shown conclusively that the Jewish cancer rate in the United States is practically the same as that of the rest of the white population living in the same environment." The quoted figures for Mohammedans, demonstrating a far lower degree of penile carcinoma, are another evidence of the value of circumcision. It has been argued that there is some racial similarity between the Semitic peoples which would allow for the lowered incidence among Mohammedans and Jews. However, Sorsby [15] demonstrates that the Indian Mohammedans are not racially allied to the Jewish people, and we are led to believe that their comparative immunity to carcinoma of the penis is due to circumcision. Similarly Stout [21] states, "Reynaud (1926) testifies to its rarity among the Jews and compares the rarity of cancer of the penis among the Mohammedan Hindus who practice circumcision and the Buddhist Hindus who do not."

Dean,[8] while reporting the only case of carcinoma occurring in a circumcised Jew, again states that circumcision would eliminate penile carcinoma. Actually, his case and Wolbarst's [2] case in an uncircumcised Jew suggest that in the presence of chronic irritation and inflammatory disease, the penile tissues of Jews react as do those of any other person, with the production of penile carcinoma.

The fact that circumcision among Mohammedans is done between the ages of 4 and 9 and may be incomplete allows for chronic changes to occur before circumcision. Therefore, while this disease is uncommon among Mohammedans, it does occur. Wolbarst [2] cites several cases to show that penile carcinoma develops on the sites of previous inflammatory diseases, demonstrating that later circumcision is not sufficient prophylaxis. Mühlpfordt [22] states, "Many years may elapse before the precancerous condition passes over into a clinically proven and histologically recognizable malignant tumor."

TREATMENT

Carcinoma of the penis may be treated either radiologically or surgically. If the tumor is superficial and no larger than 2.5 cm. in diameter, roentgen therapy may be employed. Paterson [23] states that neither radium nor high voltage roentgen therapy appears to diminish the erectile property of the penis but that sterility is almost inevitable. However, this carefully selected group of earlier lesions comprises about 10 per cent of all the cases of carcinoma of the penis that are seen, and surgical intervention is usually the treatment of choice. For larger lesions surgical intervention, including amputation of the penis and resection of the inguinal lymph nodes, is employed. It is estimated by Dean [24] that inguinal adenopathy is present in 80 per cent of cases but that only one-half have actual metastases. Toxic absorption from ulcerating primary tumors accounts for the additional adenopathy. This indicates that even in the presence of adenopathy treatment should be directed toward achieving a cure. Barringer,[25] in his experience with 100 cases, stated in 1936 that 63 of these patients had no metastases and that 55 of these 63 patients had been symptom-free for periods ranging between one and more than ten years after treatment. Eight patients died of the disease between one and five years after diagnosis. Nineteen, or 19 per cent, had been well for over five years at that time. He states that both surgical intervention and irradiation have to date proved impotent in dealing with inguinal metastases from penile carcinoma.

PATHOLOGY

The sites of origin, in order of frequency, are the frenum and prepuce, the glans and the corona. The majority of cancers of the penis are squamous cell in character. Rarely does one find a basal cell neoplasm. According to Melicow and Ganem,[13] in the precancerous lesions of the penis, such as leukoplakia and erythroplasia, and in the early malignant conditions, such as Bowen's disease, the microscopic picture resembles somewhat the early stages seen in neoplasms induced by the carcinogenic hydrocarbons.

DIAGNOSIS

Cancer of the penis must be differentiated from benign papillomas, condyloma acuminata, syphilitic chancre, soft chancres, sebaceous cysts, Peyronie's disease and erythroplasia. Occasionally the prepuce must be divided in order to make a thorough examination. Histologic verification should always be obtained.

PROPHYLAXIS

Dean [26] is quoted as saying, "Since I have been compelled to amputate approximately 200 penises for cancer and since the only cause was chronic irritation beneath a tight prepuce you may well imagine that I strongly recommend circumcision within a week of birth." After reporting his case of carcinoma in a circumcised Jew in which the neoplasm was due to a small external urethral meatus wtih chronic urinary irritation, Dean [8] amends this earlier statement by stating that if there is any obstruction at the meatal urethra a meatotomy should also be done.

The earliest reference to circumcision is found in the Bible [27] in the instruction given to Abraham that every Jewish male shall be circumcised on the eighth day of his life. Because of this instruction, ritual circumcision at the age of eight days has been faithfully performed among the Jews. A personal communication from Dr. A. Hochman, acting head of the Radium Institute of the Hadassah University Hospital, Jerusalem, states, ". . . I do know that we have not had any cases of carcinoma of penis among our Jewish patients and a very small number amongst the Arab patients. My impression is that early circumcision prevents carcinoma of penis. Later circumcision as practiced among Moslems does not have the same effect but lowers the incidence as compared to Christians." Wrana [28] writes that circumcision existed before 2400 B.C. She states that it was originally a fertility rite in primitive Ishtar

20. Wolbarst, A. L.: Is Circumcision a Prophylactic Against Penis Cancer? Cancer, New York **3**: 301-309, 1926.
21. Stout, A. P.: Human Cancer, Philadelphia, Lea & Febiger, 1932, p. 454.
22. Mühlpfordt, H.: Ueber die kondylomatoide Präkanzerose der Genitalgegend, Dermat Wchnschr. **87**: 1403, 1928.
23. Paterson, R.: The Treatment of Malignant Disease by Radium and X-Rays, Baltimore, Williams & Wilkins Company, 1948, p. 398.
24. Dean, A. L., Jr.: Epithelioma of the Penis, J. Urol. **33**: 252-283, 1935.
25. Barringer, B. S.: Inguinal Gland Metastases in Carcinoma of the Penis, J. A. M. A. **106**: 21-24 (Jan. 4) 1936.
26. Dean, A. L., Jr., cited by McMann, W.: Is Routine Circumcision of Male Children at Birth Justifiable?, Virginia M. Monthly **68**: 216-218, 1941.
27. Genesis **17**: 10-12
28. Wrana, P.: Circumcision, Arch. Pediat. **56**: 385-392, 1939.

worship and then continued as a sacrifice to the deity and as a tribal mark. In 1814 Hey in England and Roux in France called attention to the relation between phimosis and carcinoma of the penis.

Circumcision among many other peoples has been reported, including groups in Morocco, Egypt, Abyssinia, the Barbary States, the Congo and other African countries. In America circumcision has been carried out among the Aztecs, in San Salvador and the Yucatan and among the Amazon tribes. In Asia, Australia, Melanesia, Papua, the Philippines and New Caledonia circumcision is practiced. Mohammedans are circumcised between the ages of four and nine years. Many authors, among them Bryk,[29] Gerrard,[30] Holdredge and Young [31] and Stirling,[32] have described various technics of circumcision as practiced among these groups. Their statements agree as to the rare occurrence of hemorrhage, the lack of mortality, the incompleteness of the operation and its occurrence about the time of puberty.

Hillis [33] has reported meatitis as a complication of the operation. Other authors fail to recognize this possibility. A contraindication to circumcision is stated by Melicow and Ganem [13] to exist in persons with hypospadias. The same authors state, "Indifference by the obstetrician towards circumcision is to be condemned. Routine circumcision of healthy babies during infancy should be encouraged as a prophylaxis against penile carcinoma."

The *Lancet*,[34] in a pertinent editorial, stated, "For penile carcinoma the means of prevention are simple—namely hygienic care by circumcision. . . . Evidence is therefore gradually accumulating which indicates that for a number of organs cancer is, within limits, a disease which can be prevented by paying attention to the general hygiene of each particular organ throughout life."

Some authors state that in the presence of a freely mobile foreskin circumcision is unnecessary, since ordinary cleansing will remove the smegma. On this subject Parsons,[35] after describing the frequency of cancer of the penis among Haitians, states, "Bathing is common enough, but few boys or men would think of cleansing the mucous surface of the prepuce." Similarly Lewis [36] says that retractibility of the prepuce ". . . is not insurance against retention of the smegma." In 19 of his cases of penile carcinoma there was a retractible foreskin.

Frequent mention is found in the medical literature of additional benefits of circumcision. Walker [37] states that one is more likely to have balanitis and posthitis with gonorrhea in the presence of a long foreskin than if one is circumcised. He also believes that the higher incidence of syphilis found in the uncircumcised segment of the population is due to unsatisfactory prophylaxis.

CERVICAL CARCINOMA

Available figures on the incidence of cervical carcinoma demonstrate the relative infrequency of this lesion among Jewish women. The possibility that smegma may act as a carcinogenic agent, especially in the presence of an ulcerated cervix, must be borne in mind. In this connection Bessesen states,[12] "Cancer of the cervix is rarely seen without chronic endocervicitis, unhealed lacerations, old polypoid erosions, scarring or chronic infections of types still undetermined. These lesions must be as common to Jewish women as to non-Jews. The social hygiene of these people may be accepted as differing in no way from that of non-Jews. The only circumstance which alters their customs from those of other races lies in early circumcision of the Jewish male."

Kaplan and Rosh [38] state, "Of the 1,342 cases of cancer of the cervix seen by us at Bellevue Hospital since 1924 only 25 were in Jewish women." Ewing is quoted in a similar vein. Sorsby [18] cites figures from Amsterdam, Vienna, Warsaw and Budapest which show a similar lack of cervical carcinoma in Jewish women. He interprets this difference as due to the Mosaic code of cleanliness. Perhaps it is the lack of smegma that is the beneficial factor.

CONCLUSION

The evidence is overwhelmingly in favor of the fact that penile carcinoma is a preventable disease. Prevention consists in prophylactic circumsion during infancy. The effect of universal circumcision on lowering the incidence of cervical carcinoma may be important. It is for the general practitioner, pediatrician and obstetrician to consider these facts and advise their patients accordingly.

565 West End Avenue (24).

29. Bryk, F.: Circumcision in Man and Woman, New York, American Ethnological Press, 1934.
30. Gerrard, H. S.: Male Circumcision among the Amern, East African M. J. **15**: 53-54, 1938.
31. Holdredge, C. P., and Young, K.: Circumcision Rites among the Bajok, Am. Anthrop. **29**: 661-669, 1927.
32. Stirling, L.: Ritual Circumcision in Southern Tanganyika, The East African M. J. **18**: 81-89, 1941.
33. Hillis, D. S.: Concerning Circumcision, Arch. Pediat. **57**: 525-528, 1940.
34. Is Cancer Preventable, editorial, Lancet **1**: 146 (Jan. 16) 1932.
35. Parsons: Personal communication to Dr. Wolbarst.
36. Lewis, L. G.: Young's Radical Operation for Cure of Cancer of the Penis: Report of 34 Cases, J. Urol. **26**: 293-316, 1931.
37. Walker, K.: Circumcision, Brit. M. J. **2**: 1377-1378, 1938.

HYPOCOAGULABILITY OF CERTAIN IRRADIATED PLASMAS

SEYMOUR S. CUTLER, M.D.
BENJAMIN BURBANK, M.D.
and
EUGENE R. MARZULLO, M.D.
Brooklyn

Since it has become obvious that certain batches of pooled human plasma transmit the virus causing homologous serum jaundice, methods have been developed to insure the sterilization of the plasma. Of these methods, the one coming into widest use is the exposure of plasma to ultraviolet radiation. A large number of transfusions of such material has been given, apparently without causing any untoward effects. It has been stated that plasma subjected to ultraviolet irradiation is unchanged in chemical and electrophoretic behavior.[1] Recently we have found profound alterations of the clotting mechanism in certain samples of irradiated plasma which may prove to be of academic and clinical interest. In these experiments the following substances were used: (1) irradiated liquid normal human plasma (M. R. plasma)[2]; (2) lyophilized irradiated normal human plasma (S. D. lyophilized plasma)[3]; (3) irradiated normal human plasma, not lyophilized (S. D.

38. Kaplan, I. I., and Rosh, R.: Cancer of the Cervix, Am. J. Roentgenol **57**: 659-664, 1947.

From the Department of Medicine, Long Island College Hospital and Long Island College of Medicine, Brooklyn.

1. Wolf, A. M.; Mason, J.; Fitzpatrick, W. J.; Schwartz, S. C., and Levinson, S. O.: Ultraviolet Irradiation of Human Plasma to Control Homologous Serum Jaundice, J. A. M. A. **135**: 476 (Oct. 23) 1947.
2. Prepared by the Samuel Deutsch Serum Center of the Michael Reese Research Foundation.
3. Prepared as lyovac® normal human plasma, irradiated, by Sharp & Dohme, Inc.

plasma)[4]; (4) citrated normal human plasma collected from blood donors at the Long Island College Hospital, Brooklyn (B. B. plasma); (5) lyophilized normal human plasma from the American Red Cross; (6) thrombin, topical (bovine origin)[5]; (7) heparin sodium (potency 1,000 units, or 10 mg., per cubic centimeter)[6]; (8) protamine sulfate—1 per cent in sodium chloride solution,[7] and (9) toluidine blue—1 per cent in sodium chloride solution.[8]

It was found that a small and constant amount of thrombin was sufficient to cause prompt clotting of the control plasmas (table 1). Under identical conditions, two different lots of M. R. plasma (lot numbers S. P. 706 and S. P. 1346) failed to clot with 1, 10, 100 or 1,000 units of thrombin. After twenty-four hours, soft, friable, nonretracted clots formed in the tubes containing the larger amounts of thrombin. It was obvious therefore, that this plasma had been so altered that the predicted response to large quantities of thrombin did not occur. It was felt that this change might be due to heparin or heparin-like substances. An attempt was made to restore normal coagulability to the M. R. plasma with the use of protamine sulfate and the basic dye, toluidine blue. This attempt was partially successful in that with the use of these basic substances coagulation occurred, but greatly increased quantities of thrombin were necessary. It was found that with large amounts of protamine sulfate (20 mg. to each cubic centimeter of plasma) some clotting occurred with 1 to 2 units of thrombin. The character of the clot at this elevated p_H made accurate measurements difficult.[9] With diminishing amounts of protamine sulfate and increasing quantities of thrombin, the clot took on a more normal character and end points were more easily determined. A critical value of protamine sulfate was found below which the thrombin requirements rose sharply. With 1.5 mg. of protamine sulfate per cubic centimeter of M. R. plasma and 5 units of thrombin, clotting occurred in one minute. With 1.0 mg. of protamine sulfate, however, 40 units of thrombin were needed (table 2).

TABLE 1.—*Amount of Thrombin Required to Clot One Cubic Centimeter of Plasma**

Material	Thrombin (Units)
Blood bank plasma	0.4 to 0.5
Red Cross plasma	0.5 to 1.0
S. D. lyophilized plasma	0.5 to 1.0
S. D. plasma (not lyophilized)	0.5

* Clotting in one minute at room temperature in glass tubes.

TABLE 2.—*Results of the Addition of Protamine Sulfate and Thrombin to One Cubic Centimeter of M. R. Plasma**

Protamine (Mg.)	Thrombin (Units)	Result
20	1	Clot (friable)
5	5	Clot
2	5	Clot
1.5	5	Clot
1	5	No clot
1	10	No clot
1	30	No clot
1	50	No clot
1	40	Clot

* Clotting in one minute at room temperature in glass tubes.

When toluidine blue was used, the character of the clot in this basic medium was again, as expected, not conducive to exact measurment of the clotting time, and the opacity of the dye-tinted solution further hindered accurate observation. However, it was again observed that a roughly inverse ratio existed between the amounts of dye and the amounts of thrombin needed to form a clot. Thus, 1 cc. of M. R. plasma clotted with 1.5 mg. of toluidine blue plus 100 units of thrombin or 2.0 mg. of toluidine blue plus 50 units of thrombin. It is well known that the basic substances, toluidine blue and protamine sulfate, have a heparin-neutralizing effect.[10] We, therefore, added known amounts of heparin to our control plasma and compared the results with those just cited.

One cubic centimeter of B. B. plasma plus 1.0 mg. of heparin (100 units) required 10 units of thrombin to clot in one minute. Thus at least one hundred times the quantity needed to clot this heparinized blood still failed to clot M. R. plasma. When 1 mg. of heparin was added to 1 cc. of normal B. B. plasma, 2 mg. of protamine sulfate neutralized this effect and clotting occurred with 0.5 units of thrombin. When 2 mg. of protamine sulfate were added to 1 cc. of M. R. plasma, 5 units of thrombin were required to produce a clot. This represents a tenfold increase. Similar results were found with toluidine blue. It was then found that this failure to clot held, in lesser degree, with mixtures of M. R. plasma and our control B. B. plasma: 0.5 cc. B. B. plasma plus 0.5 cc. sodium chloride solution plus 0.5 units thrombin clotted; 0.5 cc. B. B. plasma plus 0.5 cc. M. R. plasma plus 0.5 units thrombin did not clot. This latter mixture required 4 units of thrombin to clot, representing an eight to tenfold increase over the amount of thrombin required to clot the control plasma.

TABLE 3.—*Effects of the Addition of Increasing Amounts of M. R. Plasma to One Cubic Centimeter of Whole Blood*

M. R. Plasma (Cc.)	Result
0.1	Clot—14 min.
0.2	Clot—20 min.
0.3	No clot
0.5	No clot
1.0	No clot

Finally, M. R. plasma in varying amounts was added to freshly drawn whole venous blood. The control blood clotted in six minutes. Table 3 shows the effects of the addition of increasing amounts of M. R. plasma to the whole blood. The data in table 3 reveal that only 0.3 cc. of M. R. plasma is sufficient to prevent the clotting of 1 cc. of whole blood, indicating that the M. R. plasma had the approximate equivalent of 0.02 mg. of heparin-like activity per cubic centimeter. However, when fifty times this amount of heparin was added to normal plasma, 10 units of thrombin sufficed to cause clotting. Hundreds of times this quantity of thrombin failed to produce a clot in M. R. plasma. Thus a complex mechanism must be postulated. In part, hypocoagulability is probably due to heparin which mixes with added plasma or blood to delay its clotting. The remainder of this phenomenon, as indicated by the failure of enormous amounts of thrombin to produce clotting, must be due to a separate mechanism. This reaction, it would seem most likely, can operate at the

4. Prepared by Sharp & Dohme, Inc., and supplied by Dr. G. Crossen of Sharp and Dohme, Inc.
5. Prepared by Parke, Davis & Company.
6. Prepared by Upjohn Company.
7. Prepared by Eli Lilly & Company.
8. Supplied by Dr. I. J. Greenblatt.
9. Ferry, J. D., and Morrison, P. R.: Preparation and Properties of Serum and Plasma Proteins, J. Am. Chem. Soc. 69:388 (Feb.) 1947.
10. Allen, J. G.; Grossman, B. J.; Eighammer, R. N.; Moulder, P. V.; McKeen, C. L.; Jacobson, L. O.; Pierce, M.; Smith, T. R., and Crosbie, J. M.: Abnormal Bleeding: Response to Treatment with Toluidine Blue and Protamine Sulfate, J. A. M. A. 139:1251 (April 30) 1949. Chargaff, E., and Olson, K. B.: Studies on the Chemistry of Blood Coagulation, J. Biol. Chem. 122:153 (Dec.) 1947.

fibrin-fibrinogen level. Since thousands of units of thrombin failed to produce visible clotting, it seems reasonable that alteration in the response of fibrinogen to the action of thrombin has taken place. This change could be: (*a*) a type of "blocking reaction," which prevents the enzymatic action of thrombin from acting on the fibrinogen molecule; (*b*) an interference with the linkage of the specific reactive groups of the fibrinogen molecules which give rise to the branching chain structure,[3] or (*c*) the failure of these chains, although they may have occurred, to undergo lateral aggregation into thick visible bundles.[2]

From the information available, this reaction results from irradiation by ultraviolet rays. These experiments demonstrate that lyophilization of plasma plays no part in the production of hypocoagulability. The Sharp & Dohme method of irradiation concentrates 90 per cent of the energy at 2,537 angstrom units. Less than 0.1 per cent of the energy falls into the Schumann region (1,751 to 2,026 angstrom units). On the other hand, the Michael Reese process uses radiations of both 2,537 and 1,849 angstrom units, thus exposing the plasma to appreciable energy falling within the Schumann region. It is thus seen that exposure to ultraviolet radiation of 2,537 angstrom units failed to produce this altered coagulability. We must conclude that this alteration is probably caused by radiant energy falling in or near the Schumann region. This demonstration that a body fluid exposed to radiation of this wave length undergoes profound biochemical changes makes it necessary to explore the physiologic potentialities of this form of energy.

SUMMARY

One system of irradiating plasma produces profound changes in the coagulation mechanism of the plasma. The explanation of the nature and cause of these changes is still obscure, but certain clinical considerations should be borne in mind:

1. Care should be taken in the administration of such plasma to patients with conditions which involve disorders of the clotting mechanism.

2. In the event of an atomic accident in a populated locale, enormous quantities of plasma will be needed for the emergency treatment of shock and trauma. Many of the patients will be potential sufferers from hemorrhagic diatheses. They may not be benefited by the administration of plasma that is hypocoagulable and interferes with coagulation of normal blood.

3. Plasma altered in this manner has potential clinical value as an anticoagulant.

Renal and Adrenal Mechanisms of Salt Conservation.—The preservation of normal sodium and potassium homeostasis requires the presence of the adrenal cortex. In man, as well as in many other animals, the removal or destruction of the adrenal cortices has resulted in a rapid depletion of the body sodium and an apparent retention of potassium, provided that replacement therapy either with additional sodium intake or with potent adrenal steroids is not instituted. The importance of the adrenals in electrolyte metabolism was further suggested by the isolation and identification of desoxycorticosterone from beef adrenals. The ability of this substance to correct many of the electrolyte disturbances of adrenal deficient animals and man has led to the hypothesis that it or similar steroids are secreted by the adrenal under conditions of sodium deficiency. Also, the demonstration of excessive retention of sodium following large doses of desoxycorticosterone has suggested that an adrenal hormone might be responsible for the retention of salt and water in pathologic conditions such as congestive heart failure and eclampsia.—William H. Daughaday and Cyril M. MacBryde, *The Journal of Clinical Investigation*, May 1950.

Special Article

MULTIPLE SCLEROSIS

GEORGE A. SCHUMACHER, M.D.
New York

Multiple sclerosis is an acute or chronic, steadily progressive or remittent disease of unknown cause, involving chiefly the white matter of the central nervous system. Spinal cord and brain (including cerebrum, cerebellum and brain stem) are involved, concomitantly or separately. Peripheral nerves (cranial and spinal) and their roots are seldom affected. The cellular gray matter of the brain and spinal cord may infrequently be the seat of lesions, but the clinical features are mainly dependent on extensive involvement of fiber tracts. Inasmuch as the onset, course and degree of dysfunction resulting from the disease are characterized by great variability from one person to the next, though within the framework of a general pattern common to most, and since the cause is unknown, it has been proposed that the illness is not a specific disease entity but a syndrome, perhaps polyetiologic.

The prominent identifying features of the condition are (1) discreteness and multiplicity of lesions, with consequent widespread symptoms and clinical signs of nervous dysfunction (isolated and confluent), and (2) the reversibility of the lesions in the earlier stages of the disease in many patients, permitting complete or partial recovery from symptoms (usually temporary). In the majority, the eventual development of permanent lesions with associated clinical downhill progression ultimately leads to death. These features have earned for the syndrome such characterizations as "a disease of remissions and exacerbations" and "a disease scattered in time and space."

INCIDENCE AND STATISTICAL DATA

Multiple sclerosis occurs in both sexes equally and appears to have no selective association with occupation or race. It has been reported in Negroes and in Chinese. Its onset is far more frequent in the younger age groups, the disease beginning commonly in early to middle adult life. Numerous series of collected cases reveal that approximately two thirds of patients have their onset of symptoms between the ages of 20 and 40 years. An almost negligible incidence of the disease is reported before the age of 10 years and a small incidence of onset after the age of 50. However, the prevalence ratio in the middle age groups is greater than that in the younger age groups because of the accumulation of living cases as age increases. In the older age groups the prevalence ratio decreases again, for the accumulation of new cases is surpassed by the number of deaths.[1] Since the criteria for the diagnosis of the syndrome are not rigidly defined, it might be pointed out in this connection that, save in autopsy-proved cases, the validity of the statistical data is influenced by the diagnostic criteria and skill of individual observers.

From available figures, the prevalence of the disease has been variously determined as approximately 35 to

Prepared for the Medical Advisory Board of the National Multiple Sclerosis Society.

Director, Neurological Service, Second (Cornell) Division, Bellevue Hospital; Associate Professor of Clinical Medicine (Neurology), Cornell University Medical College.

1. Kurland, L. T.: Personal communication to the author.

64 per 100,000 population.[2] It is estimated, nevertheless, that 50 to 100 thousand [1] (and possibly up to several hundred thousand) persons in the United States have multiple sclerosis. These figures assume greater economic significance when viewed as a proportion of the relatively restricted segment of the population in which multiple sclerosis chiefly occurs, rather than as a proportion of the total population. Such a view emphasizes the fact that the disease is a common ailment which is disabling in the prime of life. The frequency of the disease among other conditions of the nervous system is high (in countries which are located in the temperate and colder latitudes). Thus by a slight margin multiple sclerosis outranked both intracranial tumors and neurosyphilis among the total number of admissions to the National Hospital in London over a seventeen year period to 1925, comprising 8.7 per cent of the total admissions to a hospital accepting only patients with nervous diseases.[3] During a five year period over 200 patients with multiple sclerosis were admitted to a large general hospital (Boston City Hospital), outranking by far admissions for poliomyelitis, encephalitis and subacute bacterial endocarditis, thus attesting to the importance of the disease as an economic and medical problem.[4]

The higher incidence of multiple sclerosis in colder climates, though long noted, has recently been supported by a statistical study of mortality and morbidity rates in fourteen countries, including the United States.[2] It was found that an inverse ratio exists between the reported mortality due to multiple sclerosis and either latitude or mean annual temperature. The greater the distance from the equator or the colder the climate, the higher the crude death rate for multiple sclerosis becomes. Outside of northern Europe, the chief places which report a high mortality from multiple sclerosis are Canada, the United States and Australia. In North America all states and Canadian provinces with high rates (above the median) are above the 40 degree latitude parallel (which is also close to the line demarcating the 60 F. isotherm of mean annual temperature). Such differences by temperature, however, have significance only when numerous variable factors in the countries mentioned are overlooked, such as variations in diagnostic ability of physicians, medical care facilities, level of training of medical personnel, ratio of physicians to population, nomenclature and the accuracy of general mortality reporting.[5] No statistically valid seasonal or urban-rural variations have been found.

Varying estimates have been given as to the duration of the disease. In 50 cases verified at autopsy [5] the duration ranged from eight weeks to sixty-four years, the average being 11.6 years. In this group the age of death ranged from 16 to 84 years, the average being 45.3 years. Nevertheless, contrary to the pessimistic attitude of physicians and the fears of patients, statistical analysis suggests that life expectancy is only moderately diminished by the disease.[6] In a recent wider investigation it has been estimated that the average duration of the disease in the United States is approximately twenty-seven years.[2] In this investigation the results of several studies are combined to show that the mean age of onset is 28 years, the median 27 years. Current intensive study of the mean age of death due to multiple sclerosis based on a death certificate analysis from the entire United States and Canada for one year indicates a mean age of death of about 54 years.[1] On the basis of these surveys there seems little doubt that the illness lasts much longer, on the average, than has generally been believed.

PATHOLOGY

Discussion of the structural alterations in the nervous system in multiple sclerosis is difficult to dissociate from the problem of their causation, inasmuch as the most careful and detailed observations of the histologic pattern of the lesions are reported by investigators who are proponents of specific etiologic factors and who therefore place special emphasis on those changes which support their concept of causation. However, consideration of causal relationships will be preceded by a general statement of the lesions in multiple sclerosis without reference to their possible significance.

A concise summary [7] indicates that multiple sclerosis is characterized pathologically by: (1) Demyelinated glial patches (plaques), scattered mainly in the white matter throughout the central nervous system, the end results of an acute stage of tissue damage with myelin edema, fat-filled microglial elements, focal macroglial (astrocytic) proliferation and perivascular microglial (gitter cell) infiltration of the adventitial spaces (mainly venular). (It is generally agreed that lymphocytes also are prominent in the perivascular areas.) Acute, subacute and chronic patchy lesions are scattered throughout the cerebrum, brain stem and spinal cord; (2) by areas of nerve fibers deprived of myelin sheaths (so-called naked axis cylinders), some only partially covered with tumefied or fragmented myelin and others presenting destruction of both the myelin sheaths and axones, in young and old lesions, and (3) by the almost normal ganglion cells even in areas surrounded with active degeneration and reaction phenomena.

Multiple sclerosis is not a "system disease," i. e., one of diffuse degeneration, but a disseminated process with discontinuous plaques which result in degeneration of the long fiber tract only after severe lesions with destruction of axones or after repeated insults to a given pathway. The destructive process may be repeated at varying intervals and in varying sites in the nervous system during the course of the disease. As a result, in any given case the histologic picture varies from one plaque to another. The active process may terminate at any time, but there remain the residual effects of injury to myelin and the axis cylinders.[8] Despite opinions to the contrary,[8] the occurrence of occasional lesions in gray matter, either wholly within it or by extension from adjacent white matter, especially in the cortex, has been demonstrated.[9]

A divergence of opinion exists on the orientation of lesions about vessels, a relationship long cited, especially thrombosed vessels. A vascular pattern about the veins suggested by one study showed that thrombi occurred in a minority of the lesions.[10] Significant

2. Limburg, C.: The Geographic Distribution of Multiple Sclerosis and Its Estimated Prevalence in the United States, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**:15, 1950. MacLean, A. R.; Berkson, J., Woltman, H. W., and Schoonneman, L.: Multiple Sclerosis in a Rural Community, ibid. **28**:25, 1950.

3. Wilson, S. A. K.: Neurology, Baltimore, Williams & Wilkins Company, 1940.

4. Putnam, T. J.: Criteria of Effective Treatment of Multiple Sclerosis, J. A. M. A. **112**:2488 (June 17) 1939.

5. Zimmerman, H. M., and Netsky, M. G.: The Pathology of Multiple Sclerosis, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**:271, 1950.

6. Kolb, L. C.; Langworthy, O. R., and Cakrtova, M.: The Multiple Sclerosis Problem in Baltimore City, Am. J. Hyg. **35**:1, 1942.

7. Reese, H. H.: What Do We Know of Multiple Sclerosis? Journal-Lancet **66**:359, 1946.

8. Freeman, W., and Cohn, R.: Electroencephalographic and Pneumoencephalographic Studies of Multiple Sclerosis, Arch. Neurol. & Psychiat. **53**:246 (March) 1945.

9. Zeifert, M.: The Electroencephalogram of Multiple Sclerosis: Review of the Literature and Analysis of 34 Cases, Arch. Neurol. & Psychiat. **60**:376 (Oct.) 1948.

10. Dow, R. S., and Berglund, G.: Vascular Pattern of Lesions of Multiple Sclerosis, Arch. Neurol. & Psychiat. **47**:1 (Jan.) 1942.

proportions of lesions have been found around thrombosed vessels in other studies.[11] Whether thromboses represent primary lesions causing plaques or whether their occurrence is secondary or incidental to the plaques is disputed. In a most recent histologic study of 50 cases of multiple sclerosis plaques were not related to blood vessel distribution in most instances.[5] In some acute lesions centrally situated venules and capillaries had swollen endothelial cells. Thromboses were not noted within or at the margins of plaques.

In contrast to observations in acute disseminated encephalomyelitis and in experimentally induced brain anaphylaxis in animals, the latter study [5] revealed at no stage in the histogenesis of lesions extensive hemorrhagic phenomena. Nor was the process characterized by a predominant polymorphonuclear neutrophilic and especially eosinophilic leukocytic reaction. Multinucleated giant cells and epithelioid cells were absent. Vascular necrotizing lesions were not a part of the picture. There was no associated leukocytic meningitis, ventriculitis or plexitis.

Multiple sclerosis has been classified as one of the group of "demyelinating diseases" which include the related (or, better, pathologically similar) disorders, namely, the diffuse scleroses (such as Schilder's disease, or progressive subcortical encephalopathy), disseminated encephalomyelitis (spontaneous, postinfectious and postvaccinal) and optic neuroencephalomyelopathy (Devic's disease). The pathologic changes have also been closely correlated with those induced in experimental animals both by venular thrombosis and cerebral anaphylaxis. Since the majority of these conditions is characterized by a single, acute, severe episode, the link with multiple sclerosis is logical only if the pathologic process of multiple sclerosis, characterized by glial scars interspersed with acute lesions, is viewed as a chronic, relapsing form of the acute demyelinating disease.[12] The relationship between multiple sclerosis, subacute combined sclerosis, amyotrophic lateral sclerosis and "primary" lateral sclerosis—in all of which demyelination is a conspicuous feature—is even less clear.

A recent extensive pathologic study of demyelinating diseases [13] emphasized three types of leukoencephalitis: (*a*) perivenous encephalitis (including hemorrhagic encephalitis); (*b*) a type whose main feature is myelonecrosis (including multiple sclerosis and progressive subcortical encephalopathy), and (*c*) a type which is actually a panmyelitis. It is concluded that the experimental allergic types of encephalomyelitis, which are examples of perivenous encephalitis, cannot be considered experimental multiple sclerosis on the basis of pathologic characteristics.

The emphasis on demyelination as a feature relating these diseases, i. e., as a primary structural alteration of unitary etiologic significance, may be questioned. It derives from the fact that destruction of myelin sheaths, either reversible or with ultimate destruction also of axis cylinders, occurs directly rather than secondary to lesions of the ganglion cells or origin, which are primarily uninvolved. However, if the process of demyelination is viewed as one of the common, limited, nonspecific forms of response of nervous tissue to a variety of noxious influences, the designation loses some of its value both in classifying the disease and in shedding light on its essential nature. Demyelination has been viewed as due fundamentally to a disturbance of enzymatic processes necessary in the metabolism of white matter, which, as merely a type of reaction on the part of the nervous system, may be of multiple causation.[14] Thus, demyelination can hardly be construed as a feature pointing necessarily to a single cause for the various demyelinating diseases, including multiple sclerosis, or for that matter to a single cause for multiple sclerosis.

In addition, the histologic features other than demyelination (e. g., cellular reaction) found in the lesions of this group of diseases detract somewhat from the essential importance of the phenomenon of demyelination as the primary process forming a common bond linking these diseases etiologically. By no means are all of the numerous other histologic changes in the lesions of this group merely secondary and reactive to the process of demyelination. The differences in cellular reaction within the lesions of various members of this group (both human and experimental), including the controversial occurrence of mononuclear or epithelioid cells, polymorphonuclear neutrophils, eosinophils, histiocytes and hemorrhages, along with the presence or absence of chronic or necrotizing changes in artery walls and of venular thrombi have been subordinated to those cellular features common to these diseases, namely, perivascular infiltration of lymphocytes and plasma cells, edema, proliferation of microglia and their phagocytic derivatives (gitter cells, compound granular corpuscles), and proliferation of astrocytes with ultimate formation of patches of gliosis. The last-mentioned changes, common to most members of this group, appear to be largely reactive to the demyelination; they act as repair phenomena and therefore are nonspecific, as is demyelination. Thus the pathologic features which are stressed as demonstrating the etiologic unity of this group of diseases (whether under the heading of allergy, venular thrombosis or virus infection) or as pointing to a given, single cause of multiple sclerosis itself, are those which are probably nonspecific and general responses of the nervous system to injury, whereas the changes which could conceivably be specific to different etiologic factors of the various diseases are left unexplained or minimized.

ETIOLOGY

Concepts regarding the cause of multiple sclerosis, at present unknown, have been derived from two approaches to the problem: (1) The study of the specific disease itself in human beings, hypotheses concerning the pathogenesis of the disease being based on peculiar and characteristic modes of the development of symptoms and their course, on certain phenomena found in the laboratory investigation of the living patients and on certain features of the lesions as observed at autopsy. The inferences derived from these observations are largely presumptive. (2) The study of the demyelinating diseases in general, both the spontaneously occurring conditions in human beings and those experimentally produced in animals. Great significance in respect to the causation of multiple sclerosis has been attached both to the known etiologic basis of certain of the demyelinating diseases, and to the known mechanism of production of pathologic states in the nervous

11. (*a*) Putnam, T. J.: Evidences of Vascular Occlusion in Multiple Sclerosis and "Encephalomyelitis," Arch. Neurol. & Psychiat. **37**:1293 (June) 1937. (*b*) Scheinker, I. M.: Histogenesis of Early Lesions of Multiple Sclerosis: 1. Significance of Vascular Changes, ibid. **40**:178 (Feb.) 1943.

12. Ferraro, A.: Pathology of Demyelinating Diseases as an Allergic Reaction of the Brain, Arch. Neurol. & Psychiat. **52**:443 (Dec.) 1944.

13. Leukoencephalitis, Foreign Letters, J. A. M. A. **141**:793 (Nov. 12) 1949.

14. Hurst, E. W.: Acute Hemorrhagic Leucoencephalitis, M. J. Australia **2**:1, 1941; A Review of Some Recent Observations on Demyelination, Brain **67**:103, 1944.

system of animals. Evidence from both lines of study has sometimes been brought together to support a given theory of causation. It is to be emphasized that the disease has never in any given patient been proved to be the result of a specific cause, nor has the disease as it exists in human beings ever been experimentally reproduced in animals.

For purposes of this discussion the problem of etiology is best considered under the respective hypotheses that have been proposed rather than under the foregoing fundamental divisions.

Older Concepts.—Numerous causes are no longer considered tenable and will be omitted from discussion here. Other hypothetic causes and proposed mechanisms have had doubt cast on them by the contradictory findings of investigators or by failure of therapy based on such theories to result in well defined improvement. Such theoretic causes are, for example, that multiple sclerosis is due to vitamin deficiency, to nutritional deficiency, to increase in serum or cerebrospinal fluid lipase or to certain exogenous intoxicating agents. One broad inquiry by Dattner into the possible causes of multiple sclerosis[15] emphasized the probability of several etiologic factors because of the decided differences in clinical features and laboratory observations occurring in groups of patients with this disease. An aspect stressed in this investigation was the as yet neither confirmed nor disproved relationship to tuberculosis, derived from the high incidence of positive complement fixation reactions for tuberculosis in the blood samples of a series of patients with multiple sclerosis. Clinical similarities to other states such as pellagra, beriberi and scurvy and laboratory features in common with hyperchromic and hypochromic anemias and hepatic disease were cited. The insistence on histologic grounds that the disease is primarily a degenerative process, without inflammatory elements or vascular causation,[16] has shed no light on the problem of specific etiology.

Recent Theories.—Newly discovered or restudied aspects of the disease and certain features in common with other diseases have been brought into focus in attempts to illuminate the mode of pathogenesis of multiple sclerosis. Links in the pathogenesis are suggested by some of these data. The citation of demyelinating brain lesions due to endogenous intoxication in severe or terminal metabolic derangements (hepatic disease, uremia, eclampsia and porphyria) as a clue to the cause of multiple sclerosis[17] again merely emphasizes the nonspecific nature of demyelination. Preliminary studies of liver function tests in multiple sclerosis[18] have revealed definite elevations of blood thymol turbidity reaction (in the absence of other evidence of hepatic failure as shown by normal results of sulfobromophthalein sodium, cephalin flocculation and serum bilirubin tests). The abnormalities were not correlated with changes in the serum globulin as determined by the usual fractionation technic. The results of the thymol turbidity tests are interpreted as indicating primarily an alteration in serum gamma globulin. The significance of these observations remains to be determined. The possible etiologic role of deficiency of trace elements in the soil, notably copper and perhaps molybdenum, has been proposed[19] because of the close relationship between such deficiency and the occurrence of sway-back (enzootic ataxia), a demyelinating disease in lambs. The possible coincidence in the geographic distribution of multiple sclerosis and soils deficient in these trace elements is under investigation. The possible connection of brucellosis with multiple sclerosis suggested on the basis of a similarity in geographic incidence and the finding of almost 100 per cent positive skin reactivity in multiple sclerosis patients to brucellergin or Brucella antiserum (polyvalent suspension of heat-killed suis and abortus strains) in a controlled series of skin tests[20] has not been confirmed in a more recent investigation.[21] Studies of capillary resistance have revealed that multiple sclerosis patients represent a group in which capillary resistance is lower than in the normal population.[22] Whether this is merely an associated phenomenon or a link in the pathogenesis is unknown. The occurrence of demyelinating lesions in canine distemper, a virus disease, has led to renewed interest in the role of virus infection in the production of such lesions, with animal studies currently in progress.[23] The virus (exanthematous and postvaccinal) demyelinating encephalomyelitides in human beings are considered on good grounds to represent an allergic response of the nervous system.[24] Neither of the last two lines of work, of course, is concerned specifically with multiple sclerosis. On the basis of histologic study of microscopic sections from patients with multiple sclerosis, a hypothesis of lesions due to vasoparalysis of the nervous system leading to stasis of blood has been proposed.[25] The explanation of the vasoparalytic phenomenon is not given, nor is other supportive evidence provided for such a mechanism. A recently reemphasized etiologic aspect is based on evidence supporting the contention that multiple sclerosis exhibits a familial incidence more frequently than mere chance would determine.[26] It is agreed that the disease is too often nonfamilial for a familial constitutional factor to be its sole cause. It is believed, however, that there is (*a*) a familial constitutional vulnerability to multiple sclerosis, possibly nonessential and nonspecific, subclinical and inadequate to produce the disease and (*b*) a second nonfamilial exogenous cause or group of causes which is competent to evoke the disease, especially when the first, or constitutional, factor is already present.

Current Hypotheses.—Hypotheses of causation currently the center of interest and based on the most intensive investigation supported by the largest bodies of data are: (1) that the lesions are due to scattered venular thromboses in the nervous system in association with an altered coagulability of the blood; (2) that they are due to transient and repeated localized vaso-

15. Dattner, B.: Zur Pathogenese der multiplen Sklerose, Wien klin. Wchnschr. **50**:87, 1937.
16. Hassin, G. B.: Histopathology of the Peripheral and Central Nervous System, ed. 3, Chicago, The Author, 1948.
17. Baker, A. B.: Demyelination Resulting from Endogenous Toxins, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**:59, 1950.
18. Kane, C.: Personal communication to the author.
19. Innes, J. R. M.: Swayback: A. A Demyelinating Disease of Lambs with Affinities to Schilder's Encephalitis: The Role of Copper in the Aetiology; B. The Relation of Distemper Infection to the Aetiology of Canine Encephalopathies, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**:75, 1950.
20. Kyger, E. R., and Hayden, R. L.: Brucellosis and Multiple Sclerosis, Am. J. M. Sc. **216**:689, 1948.
21. Spicknall, C. G.; Kurland, L. T., and Carle, B. N.: Brucellosis Evaluation of Multiple Sclerosis Patients, to be published.
22. Alexander, L.: Report to National Multiple Sclerosis Society, June 1949.
23. Thomas, L.: The Production of "Allergic Encephalomyelitis," report to National Multiple Sclerosis Society, June 1949.
24. Finley, K. H.: The Pathology and Pathogenesis of Encephalomyelitis Associated with Vaccination and the Exanthems, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**:341, 1950.
25. (*a*) Scheinker, I. M.: Recent Advances in Research and Treatment of Multiple Sclerosis, Ohio State M. J. **45**:27, 1949; (*b*) footnote 11 b.
26. Mackay, R. P.: The Familial Occurrence of Multiple Sclerosis and Its Implications, A. Research Nerv. & Ment. Dis. Proc. (1948) **28**:150, 1950.

constriction in various parts of the nervous system; (3) that they are manifestations of allergic hypersensitivity of nervous tissue and due to antigen-antibody reactions, and (4) that they are caused by pathophysiologic mechanisms precipitated by emotional disturbances in more or less characteristic and predisposed personality types. It may be pointed out that these hypotheses are not necessarily mutually exclusive.

Venular Thrombosis: Evidence that thrombosis of venules is an essential link in the chain of causation of multiple sclerosis and the related encephalomyelitides has been obtained from a variety of investigations over a period of years. A summary of these [27] follows: Histologic pictures indistinguishable from the lesions of human encephalomyelitis in the acute stage, and of multiple sclerosis when sufficient time has elapsed to permit gliosis to take place, have been produced experimentally in animals by the retrograde obstruction of cerebral venules and by the intravenous injection of various coagulants, especially organ extracts. Similar lesions are often seen after spontaneous thrombosis of veins in human beings (in conditions other than multiple sclerosis or encephalomyelitis). Thrombi, usually in venules and veins, have been observed in a large proportion of cases of acute encephalomyelitis and of the more acute lesions of multiple sclerosis by various observers.[11] (However, all observers are not in agreement on the point of a significant prevalence of these,[10] or indeed their occurrence at all,[5] or on whether they represent cause, effect or merely a concomitant aspect of the lesion.[28] In a few cases of multiple sclerosis in which other organs of the body were available for study, thrombi were observed in them. Thrombosis of the cerebral venules occurs regularly in the exanthematous type of encephalomyelitis and in experimentally provoked cerebral anaphylaxis in animals. There is evidence to suggest that in the latter condition (experimental allergic encephalomyelitis) the lesion may be prevented by the use of anticoagulants. It is pointed out that exogenous precipitating factors in multiple sclerosis are similar to those that tend to increase the coagulability of the blood and to produce thrombophlebitis, namely, infection, trauma, chilling and pregnancy. By a highly indirect and inferential method [29] evidence has been adduced to suggest an abnormality of the blood-clotting mechanism in multiple sclerosis. However, the artificial conditions imposed in these experiments impair the validity of the conclusions. Further, the artificial production of increase in the coagulability of the blood (by means of typhoid vaccine and epinephrine injection), shown to be of slightly greater magnitude and more prolonged in patients with multiple sclerosis than in controls, did not apparently cause relapses in any of the patients subjected to the experiments. Indeed, typhoid vaccine fever therapy has actually been used in the treatment of multiple sclerosis with the reporting of beneficial results (or no improvement), though in one series [4] worsening is reported. Local predisposing factors in vein walls that would precipitate the intravenous clotting of the hypothetically abnormal blood at certain points and not at others have not been shown, though the occurrence of lesions about tortuous veins or coarse retes of vessels has been reported. Thus, despite the large amount of evidence brought forth, the essential criteria required for the final proof of scattered local thromboses due to an abnormal clotting mechanism acting as the cause of the lesions in multiple sclerosis are lacking.

Vasoconstriction: Particular attention to the retinal vessels in a small group of patients with multiple sclerosis has been reported as revealing a high incidence of arteriolar spasm of varying degrees and duration with or without accompanying scotomas.[30] Reduction, sometimes elimination, of the scotomas could be brought about and similar reduction or elimination of the vasoconstriction appeared to occur after injection of papaverine hydrochloride or inhalation of amyl nitrite on direct inspection of the retinas, though photographic proof was not provided. The hypothesis was developed that lesions throughout the central nervous system in multiple sclerosis are caused by vasospasms and reduced blood supply. Clinically, fluctuation and variability of symptoms lend support to this theory. Macular impairment due to vasoconstriction producing central scotomas (central angiospastic retinopathy) has been reported in subjects experiencing intense emotional derangements.[31] The theory of "vasoparalysis" previously alluded to briefly [2a] appears to invoke an opposite explanation for the production of lesions.

Allergic Inflammation: Evidence to suggest that the lesions in multiple sclerosis are of allergic origin have been derived from several sources: (1) clinical observations of associated factors and of the course of the disease in human beings; (2) experiments in which lesions of a hyperergic inflammatory type have been produced in the nervous system of animals by means of sensitization and presumably as the result of antigen-antibody reactions in nervous tissue (mainly cerebrum), and (3) minute comparison of the histologic picture of the various stages of lesions in multiple sclerosis with those in other demyelination diseases and with those in animal brains having undergone experimental cerebral anaphylaxis.

Clinical observations. A high incidence among persons with multiple sclerosis of allergic histories or of positive skin or conjunctival tests has been reported.[32] However, a study of the occurrence of atopy in patients with multiple sclerosis has shown its incidence to be no higher than in unselected populations.[33] A history of entirely dissociated allergies indicating a basic constitutional defect is less suggestive of an allergic cause of nervous system lesions than would be, for example, urticarial or angioedematous attacks concurrent with nervous system symptoms. The latter association has not been reported in multiple sclerosis, though it has on rare occasions been observed in connection with other acute dysfunction of the nervous system.[34] Further, positive skin tests, which represent an immediate wheal type of allergic reaction, are of little value as aids in etiologic diagnosis when the lesion is produced by a delayed type of allergy, and tests are usually nega-

27. Putnam, T. J.; Chiavacci, L. V.; Hoff, H., and Weitzen, H. G.: Results of Treatment of Multiple Sclerosis with Dicoumarin, Arch. Neurol. & Psychiat. **57**:1 (Jan.) 1947.

28. Dow and Berglund.[2a] Ferraro.[2]

29. Simon, R., and Solomon, P.: Multiple Sclerosis: Effect of Typhoid Vaccine and of Epinephrine on Coagulation of the Blood: Arch. Neurol. & Psychiat. **34**:1286 (Dec.) 1935. Simon, R.: Blood Coagulation in Disseminated Sclerosis and Other Diseases of Brain Stem and Cord, ibid. **48**:869 (Oct.) 1942.

30. Franklin, C. R., and Brickner, R. M.: Vasospasm Associated with Multiple Sclerosis, Arch. Neurol. & Psychiat. **58**:123 (Aug.) 1947.

31. Zeligs, M. A.: Central Angiospastic Retinopathy: A Psychosomatic Study of Its Occurrence in Military Personnel, Psychosom. Med. **9**:110, 1947.

32. (a) Jones, H. D.: Multiple Sclerosis: Treatment with Histamine and *d*-Tubocurarine, Ann. Allergy **6**:350, 1948. (b) Alexander.[2c]

33. Barr, R. L., and Sulzberger, M. B.: Role of Allergy in Multiple Sclerosis; Incidence of Atopy in a Series of 40 Cases, Arch. Neurol. & Psychiat. **42**:837 (Nov.) 1939.

34. Kennedy, F.: Cerebral Symptoms Induced by Angioneurotic Edema, Arch. Neurol. & Psychiat. **15**:28 (Jan.) 1926; Allergic Manifestations in the Nervous System, New York State J. Med. **30**:469, 1936.

tive in suspected allergic involvement of the nervous system according to one highly experienced observer.[35]

Clinical observation has not revealed a clearcut instance of onset or exacerbation of multiple sclerosis due to known preceding contact with a substance, e. g., food, to which the person was presumably or known to be hypersensitive. The rapid onset and transitory nature of many of the symptoms have nevertheless suggested the possibility of reversible allergic swellings in the nervous system, which if severe or repeated often enough might progress to irreversible damage. Sporadic cases have been reported in which patients had transitory symptoms of cerebral or optic nerve dysfunction [36] which, because of surrounding circumstances, were presumptively on an allergic basis, but it was not suggested that these patients had multiple sclerosis.

Allergic reactions of the brain to the Pasteur treatment of rabies and of peripheral nerves (notably brachial plexus) and brain to serum injections (especially of tetanus antiserum) and to bacterial products (typhoid vaccine) are reasonably well established,[37] and the role of active foci of infection as sources of allergens has been proposed in the genesis of neural lesions and symptoms.[38] Suggestive instances of the precipitation of severe cerebral symptoms after ingestion of specific foods [39] have been recorded. In many of the cited cases, satisfactory documentation is not provided and the relationships, stated with conviction, are purely inferential; in some there are reasonable presumptive grounds supporting but not substantiating such a hypothesis; in only a few of the examples described would there appear to be a strong relationship between ingested food and a specifically caused cerebral hypersensitivity reaction. Thus, these clinical reports provide unsatisfactory and only indirect support for the possible allergic causation of multiple sclerosis.

Experimental observations. Numerous observers have produced severe brain lesions in animals by a variety of technics employed in experimental anaphylaxis. In early studies horse serum was used as a sensitizing substance both by parenteral and intracerebral injection. Subsequently it was shown that repeated parenteral injections of heterologous emulsified brain tissue or extracts thereof could produce in the brains of monkeys, after many injections, inflammatory demyelinating lesions with symptoms resembling those of multiple sclerosis.[40] The human counterpart of the animal experiments was already present in the occasional development of encephalomyelitis after antirabies inoculations (consisting of a series of injections of rabbit spinal cord tissue). Recently it has been shown that the injection of homologous brain tissue in rabbits [41] and in monkeys [42] could produce similar acute disseminated encephalomyelitis, thus arousing the suspicion of autoimmunization as a mechanism in the production of comparable lesions in man, in other words raising the question whether antibrain antibodies might be developing spontaneously in human beings with demyelinating disease of the central nervous system. Other experiments in monkeys have shown that a positive response is obtainable to spinal cord as well as to brain tissue [43] but only to central nervous system tissue containing white matter.[44] It has been emphasized that the procedure used for producing encephalomyelitis is highly artificial and that the manner in which such a sequence of events could be initiated in human beings (liberation from the central nervous system of the tissue antigens stimulating antibody formation, which in turn react with the original tissue) in instances of spontaneously occurring encephalomyelitides or in other related diseases, is as yet completely unknown.[45]

Histologic observations. Detailed study of histologic data from brains of animals that had undergone cerebral anaphylaxis and comparison with the pathologic changes associated with acute and chronic demyelinating diseases not only have revealed striking similarities [46] but have led to the belief that all were the result of allergic reaction.[12] In the attempt to unify the various pathologic clinical and experimental demyelinating syndromes under the heading of hyperergic tissue inflammation, the microscopic similarities, which predominate, have been stressed and the microscopic differences minimized or explained on presumptive grounds. In the discussion of the possible factors responsible for such an allergic reaction in the various clinical syndromes, attention is given [12] to the possible antigenic role of the protein molecule in viruses, to the exotoxins and endotoxins of certain bacteria, to the products of intermediary metabolism of foods and to the possible development of antigens from white or gray matter (anaphylactogens) after the initial lesion is established, leading subsequently to diffuse or disseminated lesions. The proposed mechanism of hyperergic inflammation does not exclude the origin of plaques through thrombus formation or from vascular damage, both of which are integral aspects of the allergic reaction. A specific consideration of the pathologic features and stages in the development of encephalomyelitis associated with exanthems [24] has led to the opinion that even in these acute virus infections the mechanism operative in the production of the lesions of the central nervous system is that of antigen-antibody response.

Emotions and Personality Factors: The existence of emotional instability in patients with multiple sclerosis has long been recognized. Neurotic manifestations have often obscured the first evidence of central lesions, causing many false diagnoses of hysteria for the entire

35. Cooke, R. A., and others: Allergy in Theory and Practice, Philadelphia, W. B. Saunders Company, 1947.

36. Kennedy,[35] Cooke and others.[35]

37. Kennedy, F.: Nervous Complications Following the Use of Therapeutic and Prophylactic Serums, Tr. Am. Neurol. A. **54**: 410, 1928; Am. J. M. Sc. **177**: 335, 1929. Griffin, M. E.; Rogers, H. M., and Kernohan, J. W.: Postvaccinal (Typhoid) Encephalitis: Arch. Neurol. & Psychiat. **59**: 233 (Feb.) 1948.

38. Kennedy, F.: Focal Infections Complicating the Nervous System, Am. J. M. Sc. **165**: 305, 1923.

39. Eyermann, C. H.: Allergic Headache, J. Allergy **2**: 106, 1930. Pardee, I.: Allergic Reactions in the Central Nervous System; Report of 2 Cases, Arch. Neurol. & Psychiat. **39**: 1360 (June) 1938. Clark, T. W.: Allergic Manifestations in the Central Nervous System, New York State J. Med. **39**: 1498, 1939. Winkelman, N. W., and Moore, M. T.: Allergy and Nervous Diseases, J. Nerv. & Ment. Dis. **93**: 736, 1941. Footnotes 34 and 35.

40. Rivers, T. H., and Schwentker, F. F.: Encephalomyelitis Accompanied by Myelin Destruction Experimentally Produced in Monkeys, J. Exper. Med. **61**: 689, 1935. Ferraro, A., and Jervis, G. A.: Experimental Disseminated Encephalopathy in the Monkey, Arch. Neurol. & Psychiat. **43**: 195 (Feb.) 1940. Kabat, E. A.; Wolf, A., and Bezer, A. E.: Rapid Production of Acute Disseminated Encephalomyelitis in Rhesus Monkeys by Injection of Brain Tissue, Science **104**: 362, 1946.

41. Morrison, L. R.: Disseminated Encephalomyelitis Experimentally Produced by the Use of Homologous Antigen, Arch. Neurol. & Psychiat. **58**: 391 (Oct.) 1947.

42. (a) Kabat, E. A.; Wolf, A., and Bezer, A. E.: Rapid Production of Acute Disseminated Encephalomyelitis in Rhesus Monkeys by Injection of Heterologous and Homologous Brain Tissue with Adjuvants, J. Exper. Med. **85**: 117, 1947; (b) Studies on Acute Disseminated Encephalomyelitis Produced Experimentally in Rhesus Monkeys, III., ibid. **88**: 417, 1948.

43. Morgan, I. M.: Allergic Encephalomyelitis in Monkeys in Response to Injection of Normal Monkey Cord, J. Bact. **51**: 614, 1946.

44. Morgan, I. M.: Allergic Encephalomyelitis in Monkeys in Response to Injections of Normal Monkey Nerve Tissue, J. Exper. Med. **85**: 131, 1947.

45. Kabat, E. A.; Wolf, A., and Bezer, A. E.: Studies on Acute Disseminated Encephalomyelitis Produced in Rhesus Monkeys: IV., J. Exper. Med. **89**: 395, 1949.

46. Ferraro,[40] Morrison,[41] Kabat, Wolf and Bezer.[42a]

syndrome. Until recently this has been considered entirely as a problem of differential diagnosis, but at present attention is being given to the possibility that emotional disturbances may be not only concomitants or results of damage to the central nervous system but also important factors in its causation.[47]

Controlled psychologic investigations have revealed significant personality deviations.[48] In a large group of patients with multiple sclerosis there have been found: (1) a high incidence of the trait of passive dependency; (2) far less conscious or expressed concern with bodily symptoms than in the controls (comprised of "normals," patients with other disease of the central nervous system and neurotic persons); (3) an almost exaggerated submission, compliance and absence of awareness of inner tension, and (4) an attitude of excessive cordiality and friendliness in patients toward their fellow men and the world at large. This has raised the question whether persons are more prone to the development of multiple sclerosis because of these traits or whether the traits are superimposed on patients with the disease, regardless of their original personality, because of uniform reactions to certain common difficulties, internal and external.

Some light has been shed on this problem by careful psychiatric investigations of the longitudinal personality development of selected persons with multiple sclerosis,[47b] revealing emotional abnormalities long before signs of organic disease, i. e., premorbid personalities of great immaturity since childhood. In such persons it would appear that a common factor is the lack of gratification in childhood of an excessive need for love and affection resulting in frustrations that evoke anger which must be suppressed in order to preserve other available gratifications. The personality then assumes the form of an outwardly calm, unconcerned person with deeply concealed inner tension whose paramount desire is to please and be approved. In the persons studied, new responsibilities, increased work, conflicts and anxieties related to specific situations and interpersonal relationships brought on increase or recrudescence of symptoms. Remissions frequently occurred when the patient was able to rest or give up some responsibility. The psychologic stresses are presumed to precipitate the disease through as yet unknown mechanisms (perhaps vascular spasms [49] caused by repressed rage, augmented from time to time by severe frustration). It is concluded [47b] that the psychodynamic factors in this psychosomatic disintegration, the end result of which may be characterized by demyelination and patchy areas of axonal destruction, are in themselves probably based on some unknown constitutional abnormalities.

To conclude the discussion of etiologic factors in multiple sclerosis, mention should be made of common precipitating factors related to both onset and exacerbations of the disease. These include chilling, fatigue and emotional upsets. A paradoxic clinical observation (in view of the apparent role of chilling as a precipitating factor, the higher incidence of the disease in cold climates and the possible role of vasoconstriction in the genesis of the lesion) is the transitory decided increase in weakness and spasticity complained of by patients after sun baths or during baths in hot water. Preliminary experimental observations on the results of immersing patients with multiple sclerosis in water heated to 108 F. and on the results of immersing a portion of the body (one arm) in a hot water bath have shown pronounced alterations in certain functions and measurable increase in dysfunction. Such worsening of the condition of patients is transient, invariably disappearing with cooling. The possible significance of these observations is being studied.[50] Pregnancy has always been considered a noxious factor in the precipitation or worsening of the disease. Two recent studies of the problem reveal either no or a dubious relation of pregnancy to onset or exacerbations.[51] Infections and injuries, though long considered unfavorable factors which could initiate or exacerbate the disease, could not be proved to play a specific role in another study of a large group of persons with multiple sclerosis.[52]

(To Be Continued)

47. (a) Langworthy, O. R.: Relation of Personality Problems to Onset and Progress of Multiple Sclerosis, Arch. Neurol. & Psychiat. **59**: 13 (Jan.) 1948. (b) Grinker, R. R.; Ham, G. C., and Robbins, F. P.: Some Psychodynamic Factors in Multiple Sclerosis, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**: 436, 1950. (c) Jelliffe, S. E., and White, W. A.: Diseases of the Nervous System, A Text-Book of Neurology and Psychiatry, Philadelphia, Lea and Febiger, 1935.

48. Harrower, M. R.: The Results of Psychometric and Personality Tests in Multiple Sclerosis, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**: 461, 1950.

49. Langworthy, O. R.: A Survey of the Maladjustment Problems in Multiple Sclerosis and the Possibilities of Psychotherapy, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**: 598, 1950. Jelliffe, S. E.: Multiple Sclerosis and Psychoanalysis, Am. J. M. Sc. **161**: 666, 1921.

50. Guthrie, T. C.: Personnal communication to the author.

51. Muller, R.: Studies on Disseminated Sclerosis, Acta med. Scandinav. 1949, supp. 222. Tillman, A. J. B.: The Effect of Pregnancy on Multiple Sclerosis and Its Management, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**: 348, 1950.

52. Keschner, M.: The Effect of Injuries and Illness on the Course of Multiple Sclerosis, A. Research Nerv. & Ment. Dis., Proc. (1948) **28**: 533, 1950.

Director of the laboratory at the Children's Hospital in Washington, D. C. (Dr. Rice).

Pediatric allergy resident at the Roosevelt Hospital in New York; former pediatric resident at the Children's Hospital in Washington, D. C., where this case was diagnosed and followed (Dr. Frazier).

1. Blackfan, K. D., and Diamond, L. K.: Atlas of the Blood in Children, New York, The Commonwealth Fund, 1944, vol. 2, p. 83.

2. Mulherin, W. A., and Houseal, R. W.: Sickle Cell Anemia from a Pediatric Point of View, Tr. Sect. Dis. Child., A. M. A. pp. 77-78, 1924.

3. Branch, H. E.: Sickle Cell Anemia in a Six Months Old Colored Female Infant: Report of a Case, J. Michigan M. Soc. **32**: 35, 1933.

4. Wollstein, M., and Kreidel, K. V.: Sickle Cell Anemia, Am. J. Dis. Child. **36**: 998 (Nov.) 1928.

Clinical Notes, Suggestions and New Instruments

NEONATAL SICKLE CELL ANEMIA

CLAUDE ALBEE FRAZIER, M.D.
New York
and
CLARENCE E. RICE, M.D.
Huntington, W. Va.

The purpose of this report is to emphasize the possibility of the occasional early onset of sickle cell anemia and to consider it in the differential diagnosis of jaundice during the neonatal period in the Negro.

Sickle cell anemia [1] is a hereditary and congenital disease of the hemopoietic system occurring almost entirely in members of the Negro race. It is characterized by the presence of crescent-shaped or sickle-shaped red blood cells which, under certain conditions, are hemolyzed, resulting in anemia. From numerous investigations, it appears that between 5 and 10 per cent of all persons showing sicklemia later show an associated anemia. Even though the young are more prone to the disease than the old, it may occur at almost any age. Mulherin [2] reported that the blood from the cords of 2 newborn infants and from the peripheral circulation of 2 babies, aged 3 and 5 days, who were born of mothers with sickle cell anemia, showed sickle cells in the peripheral blood smear. Branch [3] reported a case of sicklemia in a 6 month old infant, and Wollstein and Kreidel [4] reported a case in a child 3 months of age.

Prior to the following case, to our knowledge, there has been only 1 report of sickle cell anemia in a 1 month old infant. This patient, whose condition was reported by Cohen, Miller and Orris,[5] died shortly after the hemolytic process had been established, despite supportive therapy. The hemolytic process in this case may have been precipitated by acute purulent otitis media. Experience has seemed to indicate that the earlier the onset occurs, the more severe the disease is likely to be and the poorer is the ultimate prognosis. Intercurrent infection is the most common cause of death from this disease in young children, but death may be caused by the anemia.

In differentiating the active stage from the latent stage of sickle cell anemia we may say that the active stage shows severe anemia, an elevated white blood cell count, with an increased number of sickled erythrocytes and of phagocytes, yellow scleras, enlarged lymph nodes, urobilinuria, fever and arthritic and epigastric pains. The latent stage may show sickling of the red blood cells in four to twenty-four hours, an absence of subjective symptoms, mild anemia (or none) and a slight icteric tinge to the scleras. There may also be enlargement of the lymph nodes.

REPORT OF CASE

D. M., a Negro infant aged 19 days, was admitted to the Children's Hospital because of jaundice which had persisted since the age of 3 days. Delivery had been normal after four hours of labor. His birth weight was 10 pounds 13 ounces (4,848 Gm.). The infant had a large amount of mucus, causing some difficulty in respiration, which necessitated continuous administration of oxygen for one week after birth. A yellow tinge to the skin of the infant was noted at the hospital on the third day of life, but he was discharged to his home on the seventh day. Here his mother noted a yellow tinge to his eyes and an eruption over his arms and shoulders. He was brought into the hospital because of the continued jaundice.

This was the mother's eighth pregnancy. There had been no deaths among the siblings, the oldest of whom was 19 years. The mother had had an episode of jaundice three years prior to the infant's admission to the hospital. Otherwise the family history was noncontributory.

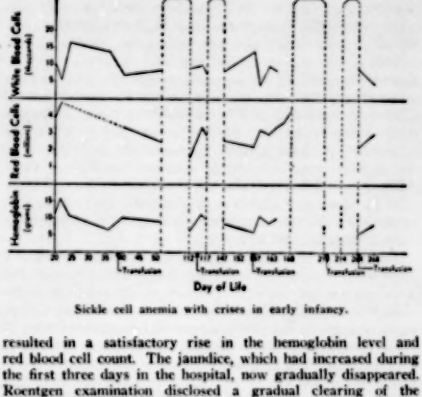
Physical examination of the patient revealed rather pronounced icterus of the skin and the scleras. There was a papular eruption involving the skin of both cheeks, shoulders, axillas and antecubital spaces. The edge of the liver was barely palpable. The hemoglobin was 11.5 Gm. per hundred cubic centimeters. The red blood cell count was 4,000,000. There were 10,000 white cells with a normal differential count.

Results of Laboratory Examinations

Age in Days	Van den Bergh: Qualitative	Van den Bergh: Bilirubin, Mg. per 100 Cc.	Icteric Index
20	.....	...	55
21	Immediate direct	7.5	90
31	Delayed direct	1.6	31
47	Indirect	1.4	21
48	Transfusion		
51	Indirect	1.4	16

The urine was essentially normal. The blood counts during this and subsequent admissions to the hospital are given in the accompanying chart. The van den Bergh and icteric indexes are shown on the accompanying table. The Wassermann and cephalin flocculation tests gave negative reactions, and the blood culture was sterile. Infant and mother were both Rh positive. The prothrombin was 95 per cent of normal. The fragility test showed beginning hemolysis at 0.46 per cent and complete hemolysis at 0.32 per cent. The control readings were the same. The stools contained 66 Ehrlich units of urobilinogen per hundred grams and the urine contained bilirubin. A roentgenogram of the long bones revealed essentially normal conditions, but roentgen examination of the chest disclosed some increased radiodensity over the right side of the chest with a compensatory emphysema on the left. The possibility of a mucous plug in the right bronchus was suggested.

During hospitalization the hemoglobin level of the patient gradually dropped. On the sixteenth hospital day a sickle cell preparation revealed 40 to 50 per cent sickling of the red blood cells. The following day a transfusion was given, which



Sickle cell anemia with crises in early infancy.

resulted in a satisfactory rise in the hemoglobin level and red blood cell count. The jaundice, which had increased during the first three days in the hospital, now gradually disappeared. Roentgen examination disclosed a gradual clearing of the pulmonary signs, and on the thirty-fifth hospital day the patient was discharged in good condition.

Two months later the infant was brought to the hospital with a history of fever, puffy eyes and poor appetite during the previous week. A diagnosis of tonsillitis was made, and an injection of penicillin was given. His hemoglobin level on admission to the hospital was 5.5 Gm.; the red blood cell count had fallen to 3,300,000. A sickle cell preparation made after a blood transfusion had been given showed 20 per cent sickling of the red corpuscles. He was discharged in good condition on the eleventh hospital day.

One month later, at the age of 5 months, he returned having fever, puffy eyes and a running nose on the night of admission. Examination revealed an infected pharynx and tonsils. The hemoglobin level was 5.5 Gm. and the red blood cell count 2,200,000. Roentgen examination of the chest disclosed an infiltrative process involving the inner two thirds of the left lung. Treatment at this time consisted of penicillin administration and a blood transfusion. The infant improved and was discharged on the eighth hospital day with a hemoglobin level of 10.5 Gm. and a red blood cell count of 3,200,000.

He was readmitted one and three-fourths months later, at the age of 7 months (210 days). History of listlessness and fever for one day prior to admission was obtained. Physical examination revealed a temperature of 103 F. and pharyngitis. The head was 18.5 inches (47 cm.) in circumference and the chest 17 inches (43 cm.) in circumference. Examination of the heart disclosed a short apical systolic murmur. The hemoglobin level was less than 7.5 Gm., and the red blood cell count was 2,300,000. Sulfadiazine therapy was started, and a blood transfusion was given. The patient's temperature dropped to normal on the following day. Roentgen examination of the skull revealed normal conditions with no evidence of hyperplastic bone marrow as is sometimes seen in the three chronic hemolytic anemias of infancy and childhood; i. e., Mediterranean anemia, sickle cell anemia and familial hemolytic icterus. Because of the enlargement of the head a subdural tap was done, which revealed normal fluid.

5. Cohen, S. M.; Miller, B. W., and Orris, H. W.: Fatal Sickle Cell Anemia in a One-Month-Old Infant, J. Pediat. **30**: 463, 1947.

His last admission to the hospital was one and a half months later, at the age of nearly 9 months (264 days). He had had a history of puffy eyes and impetigo for a week prior to admission. Poor appetite and a cold had been observed on the day before admission, and there had been an onset of vomiting and fever on the day he entered the hospital. The head measured 19 inches (48.3 cm.) in circumference and the chest 17.5 inches (44.5 cm.) at this time. The hemoglobin level was 5.5 Gm., with a red blood cell count of 2,200,000. The white cell count was 9,600 with a normal differential count. Roentgen examination of the chest revealed a small area of calcification in the right hilus, probably indicative of a healed primary complex. A neurologic consultant considered that the enlargement of the head was caused by changes incident to sickle cell anemia and not hydrocephalus.

A transfusion was given and penicillin therapy started. The impetigo was treated with ammoniated mercury ointment. After the transfusion the blood count was 11.5 Gm. with a red cell count of 3,200,000. The infant was discharged in good condition, to be followed in the outpatient clinic.

COMMENT

On entering the hospital this infant presented a diagnostic problem because of the extreme rarity with which sickle cell anemia has been considered in connection with this age group. It must be realized that sickle cell anemia causes somewhat more vague and varied symptoms in the infant than in the older child. This detailed history was given to show these symptoms of sickle cell anemia in the infant. The most commonly observed symptoms in this case were vomiting, fever, listlessness and puffy eyes. Laboratory data confirmed the diagnosis of hemolytic anemia of extrahepatic origin.

Observers have noted that the anemia of sickle cell anemia is cyclic; as can be seen by the accompanying chart, this was demonstrated in the present case. It is possible that the infant was recovering from a crisis when he was first admitted to the hospital. The hemoglobin level rose from 11.5 to 15 Gm. during the first three days in the hospital, with a corresponding rise in the red blood cell count and a drop in the white cell count. This can only be a supposition, however, and it was not until the sixteenth hospital day that the diagnosis of a sickle cell crisis was made. No definite precipitating factor can be established for the first crisis. The crises were probably precipitated by infections of the upper respiratory tract.

The spleen was not enlarged at any time; however,[4] the spleen is likely to vary in size in patients with sickle cell anemia during the first 4 years of life.

Sickle cell anemia is chiefly a pediatric problem. Families with this trait[2] have a high child mortality rate, and the children are more likely to be subject to malnutrition, underdeveloped and therefore susceptible to various infections. Babies and children who have sickle cell anemia in its latent stage should have the advantage of an early diagnosis. They should likewise have the advantage of proper nutrition, the best of hygienic care and avoidance of all possible infectious agents to enable them to reach adult life without the development of the active stage of the disease. This patient's development has been normal, owing in large part, we believe, to the fact that the mother had been warned of the necessity of bringing the infant to the outpatient clinic for routine examinations. She had also been cautioned to regard any infection of the upper respiratory tract seriously, to have it treated vigorously and, if necessary, to have the child hospitalized.

SUMMARY AND CONCLUSION

The case of the youngest patient with sickle cell anemia in crisis to survive with a follow-up is here reported. The occurrence of sickle cell anemia in the newborn is considered rare, but there is a possibility that it may have occurred more often than has been recognized. This possibility must be kept in mind in the consideration of jaundice or anemia in a Negro patient of this age group.

TREATMENT OF ACTINOMYCOSIS WITH AUREOMYCIN

Report of a Case

LEON V. McVAY Jr., M.D.
DAVID DUNAVANT, M.D.
FRANCES GUTHRIE
and
DOUGLAS H. SPRUNT, M.D.
Memphis, Tenn.

Since 1878, when Israel[1] reported a case of actinomycosis in man, there has been steady improvement in the therapy of this infection. Recognition of the frequency and seriousness of this disease has also increased tremendously in recent years. Cope[2] reported that several thousand articles had been published on this subject, and it is now apparent that actinomycosis is worldwide in distribution. Also, it has been established that this infection is not more common in rural than in urban areas.[3] Dubos[4] states that the etiologic agent of actinomycosis is a true parasite of the mucous membranes and that it is never found in nature apart from a parasitic or pathogenic habitat. Pathogenic actinomyces have been isolated from pyorrhea pus, dental scum, salivary calculi, carious teeth and tonsillar crypts. It therefore appears that the source of this disease is endogenous rather than exogenous.

There have been many projected methods of treatment of actinomycosis, including the use of such preparations as iodides, thymol, copper or iron salts, arsphenamine and vaccines. Harsha,[5] in 1904, first introduced radiation therapy, and in 1905 Bevan[6] used radium emanations. Kolouch and Peltier[7] found that irradiation therapy was effective against circumscribed lesions but was of little value when there was extensive involvement. Wangensteen[8] emphasized repeated excision and curettage in the treatment of extending infections. In 1937 sulfonamide therapy was introduced,[9] and in 1941 the use of penicillin was begun.[10] Recently, Sanford and Barnes[11] reported a great improvement in the prognosis and a decided reduction in the morbidity of abdominal actinomycosis when massive doses of penicillin were used.

Despite improved methods, the treatment of actinomycosis has remained prolonged; recurrences have not been uncommon, and the mortality is still significant. Therefore, we decided to investigate the therapeutic effectiveness of aureomycin in actinomycosis.

REPORT OF CASE

R. W., a 36 year old Negro farmer, entered John Gaston Hospital on Nov. 18, 1949. On May 26, 1949 the right lower third molar had been extracted. Approximately one week later pain, tenderness and swelling were noted in the right inframandibular area. Despite local therapy by the dentist, this progressed, and on June 28 the patient consulted his family physician. For the ensuing eighteen days he was given 400,000 units of penicillin intramuscularly every twenty-four hours. While there was a reduction in discomfort, little or no decrease in the size of the swelling was observed. On July 31 the

From the Divisions of Medicine, Surgery, Pathology and Bacteriology, University of Tennessee College of Medicine, and John Gaston Hospital, Memphis.

1. Israel, J.: Neue Beobachtungen auf dem Gebiete der Mykosen des Menschen., Arch. f. path. Anat. **74**: 15-53, 1878.
2. Cope, Z.: Actinomycosis, New York, Oxford University Press, 1938.
3. Davis, M. I. J.: Analysis of 46 Cases of Actinomycosis with Special Reference to Its Etiology, Am. J. Surg. **52**: 447-454, 1941.
4. Dubos, R. J.: Bacterial and Mycotic Infections of Man, Philadelphia, J. B. Lippincott Company, 1948.
5. Harsha, W. M.: Actinomycosis of the Jaw, Ann. Surg. **39**: 439-460, 1904.
6. Bevan, A. D.: Actinomycosis, Ann. Surg. **41**: 641-654, 1905.
7. Kolouch, F., and Peltier, L. F.: Recent Advances in Surgery: Actinomycosis, Surgery **20**: 401-430, 1946.
8. Wangensteen, O. H.: The Role of Surgery in the Treatment of Actinomycosis, Ann. Surg. **104**: 752-770, 1936.
9. Poulton, E. P.: Discussion of the Treatment of Bacterial Diseases with Substances Related to Sulphanilamide, Proc. Roy. Soc. Med. **31**: 149-166, 1938.
10. Florey, M. E., and Florey, H. W.: General and Local Administration of Penicillin, Lancet **1**: 387-396, 1943.
11. Sanford, G. E., and Barnes, R. O.: Massive Penicillin Therapy of Abdominal Actinomycosis, Surgery **25**: 711-723, 1949.

patient returned to his physician and was given a second course of 400,000 units of penicillin intramuscularly each day for twelve days. Again, little change was observed. On November 1 the patient was referred by his physician to the West Tennessee Cancer Clinic, and a biopsy of the lesion was done. There was a chronic inflammatory reaction. Penicillin therapy in the same dosage as before was resumed for six days. Also, the involved area was treated with 200 roentgen units on two consecutive days. There was a temporary reduction in the size of the mass, but by November 17 the lesion had progressed to involve the neck, and it had become almost impossible for the patient to open his mouth. The diet was limited to liquids. Furthermore, three draining sinuses had appeared. One sinus was located at the site of the biopsy; the other two had developed spontaneously in nearby areas. The patient was hospitalized the following day.

Physical examination on admission revealed an oral temperature of 99 F., a pulse rate of 92 per minute, a respiratory rate of 16 per minute and a blood pressure of 132 systolic and 92 diastolic. The mouth could be opened no more than 1 cm. A firm, nontender, indurated, slightly erythematous mass involved the greater portion of the right side of the face and extended inferiorly to include the upper area of the neck on the same side. The skin over this lesion was thickened and moderately furrowed. This mass measured approximately 11 by 7.5 by 5.5 cm. A yellowish, purulent material, containing sulfur-like granules, was exuding from the three sinuses. The diagnosis of cervicofacial actinomycosis was established grossly and microscopically. A culture yielded Actinomyces bovis. Roentgenograms of the cervical vertebrae, right mandible and chest were interpreted as being within normal limits.

The white blood cell count was 9,950 per cubic millimeter, with a differential cell count of 67 per cent polymorphonuclear leukocytes, 22 per cent lymphocytes, 6 per cent eosinophils and 5 per cent large mononuclear leukocytes. The red blood cell count was 4,630,000 per cubic millimeter, and the hemoglobin was 13.2 Gm. per hundred cubic centimeters. The urine was essentially normal. The sedimentation rate (Wintrobe) was 5 mm. in sixty minutes (corrected). The reaction to a first strength intradermal tuberculin test (purified protein derivative) was negative, but to the second strength it was 1 plus at forty-eight hours.

On November 25, aureomycin therapy was instituted in dosage of 750 mg. orally every four hours. Simultaneously, aureomycin was applied locally twice daily in the form of a semipaste, which was prepared by the addition of a small amount of tap water to a powder composed of 500 mg. of aureomycin in 3 Gm. of talc. This preparation for local application has been described in a previous publication.[12] The response was dramatic. In forty-eight hours the patient was afebrile and able to eat comfortably. In four days there had been decided reduction in the swelling and induration, and in twelve days all drainage from the sinuses had ceased and epithelization was evident. Local therapy was discontinued on the seventh day, and after ten days, the oral dose of aureomycin was reduced to 500 mg. every four hours. Repeated measurements of blood levels of aureomycin varied from 2 to 8 micrograms per hundred cubic centimeters. All treatment was discontinued after twenty-eight days. When therapy was terminated, there was only a minimal amount of scarring at the sites of the previous sinus orifices, and no lymphadenopathy could be detected. Aside from mild nausea for two days, no toxic reactions to aureomycin were noted. The patient was discharged seventeen days after the completion of treatment, to be followed through the outpatient department.

COMMENT

That it is hazardous to attempt an evaluation of the efficacy of an antibiotic in a given disease on the basis of its trial in 1 case is evident. This is especially true when the observation period is relatively brief and the disease involved is characterized by a tendency to recur. However, the excellent results obtained in this case have led us to present this material so that others may expand the investigation by using aureomycin in more complicated and serious cases of actinomycosis. The favorable response noted in this case of cervicofacial involvement stimulates the hope that aureomycin may likewise be effective in the thoracic and abdominal forms of actinomycosis.

ADDENDUM

This patient has now been observed at monthly intervals for six months since completion of the treatment. All evidence of lesions has disappeared except for a barely palpable induration at the site of one of the original draining sinusoids. Lymphadenopathy is not present, and the patient is entirely asymptomatic. In addition, one of us (L. V. McV.) has successfully treated actinomycosis with aureomycin in 3 additional cases. These are being reported elsewhere.

12. McVay, L. V.; Laird, R. L.; Flanagan, J. B., and Sprunt, D. H.: The Treatment of Trichomonas Vaginalis Vaginitis with Aureomycin, Proc. Soc. Exper. Biol. & Med., to be published.

Council on Pharmacy and Chemistry

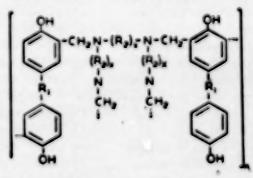
NEW AND NONOFFICIAL REMEDIES

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

R. T. Stormont, M.D., *Secretary.*

POLYAMINE-METHYLENE RESIN. — Resinat

(National Drug).—A polyethylene polyamine methylene substituted resin of diphenylol dimethylmethane and formaldehyde in basic form. The structural formula of polyamine-methylene resin may be represented as follows:



Actions and Uses.—Polyamine-methylene resin is a synthetic acid-binding resin capable of withdrawing acids from solution by molecular absorption. This property has been utilized clinically by administering the resin orally as a gastric antacid for the control of symptoms in simple hyperacidity and in peptic ulcer. The antacid effects apparently result from a temporary binding in the stomach of gastric hydrochloric acid and pepsin which are later released in the intestine. The resin itself is then eliminated unchanged from the gastrointestinal tract without any permanent ionic disturbance of the body fluids. Like other antacids, this resin should be regarded as only an adjunct in the treatment of peptic ulcer; it is not recommended in the treatment of gastritis, "heartburn" or dyspepsia, which may or may not be associated with increased gastric acidity. Recommendations for its use in simple gastric hyperacidity should not imply that it is of value in all diseases in which this condition exists, unless it can be demonstrated that the symptoms are directly related to the hyperchlorhydria.

Polyamine-methylene resin is essentially nontoxic, but large doses may induce nausea or vomiting unless the taste of the resin is suitably masked.

Dosage.—Polyamine-methylene resin is administered orally in the form of powder, capsules or tablets. For the relief of symptoms in acute or chronic peptic ulcer, 0.5 to 1.0 Gm. every two hours is recommended, but larger doses may be necessary in some cases. The dosage required depends partially on the amount and frequency of food consumption. This drug should not be employed as a substitute for the customary dietary restrictions in the treatment of peptic ulcer. For administration as a powder, the resin should be quickly stirred in water, milk or other liquid, but it is probably more palatable in the form of capsules or tablets.

Tests and Standards.—

Physical Properties: Polyamine-methylene resin is a light amber, granular, freely flowing powder without appreciable odor. It is insoluble in dilute acids and alkalis, alcohol, ether and water; however, a small amount of colored material is extracted by aqueous systems.

Purity Tests: Thoroughly char 2 Gm. of polyamine-methylene resin, and add 30 ml. of diluted hydrochloric acid and 3 ml. of bromine T.S. Cover the dish and boil gently for 5 minutes. Filter, wash the residue with 25 ml. of hot water, combine the filtrates and evaporate to dryness. Dissolve the residue in 15 ml. of water, add 2 ml. of diluted acetic acid and use this solution as directed in the heavy metals test, *U. S. P. XIII*, page 657: the resin contains no more than 10 ppm. of heavy metals.

Mix 0.5 Gm. of polyamine-methylene resin with 1 Gm. of potassium nitrate and 1 Gm. of sodium carbonate. Ignite until the organic material is completely oxidized, and cool the residue and dissolve it in 30 ml. of diluted sulfuric acid. Evaporate the solution until sulfur trioxide fumes are evolved. Use this solution as directed in the test for arsenic, *U. S. P. XIII*, page 618. The amount of arsenic present is not more than 0.8 ppm.

Shake 2 Gm. of polyamine-methylene resin and 20 ml. of water for 15 minutes at room temperature, and filter the solution. To 10 ml. of the filtrate add 5 ml. of 1 per cent resorcinol solution and layer carefully over 5 ml. of sulfuric acid to form two distinct layers; no discoloration is observed at the liquid-liquid interface (*absence of formaldehyde*).

Shake 2 Gm. of polyamine-methylene resin and 20 ml. of water for 15 minutes at room temperature, and filter the solution. Dissolve 1 Gm. of sodium carbonate monohydrate, 1 Gm. of mercuric chloride and 4 Gm. of sodium chloride in 30 ml. of water, and filter the solution. Add 0.5 ml. of the resin filtrate to 20 ml. of the reagent solution: not more than a slight white precipitate is formed (*absence of free ammonia*).

Dry 5 Gm. of polyamine-methylene resin at 105 C. for 4 hours: the loss in weight is not more than 15 per cent.

Ignite 2 Gm. of polyamine-methylene resin to which 2 ml. of sulfuric acid has been added: the residue is not more than 1.0 per cent.

Assay: (Acid-consuming Capacity) Accurately weigh 1 Gm. of polyamine-methylene resin, transfer it to a 250 ml. glass-stoppered flask and add 100 ml. of 0.1 *N* hydrochloric acid. Agitate the flask for 1 hour, filter the solution, pipet 50 ml. of the filtrate into a 250 ml. flask and titrate the excess acid with 0.1 *N* sodium hydroxide, using bromothymol blue T.S. as the indicator. Not less than 50 ml. of 0.1 *N* hydrochloric acid is consumed by the resin.

(Nitrogen) Accurately weigh 1 Gm. of polyamine-methylene resin and transfer it to a Kjeldahl flask. Determine the nitrogen as directed in *U. S. P. XIII*, page 671. The amount of nitrogen present is not less than 14 nor more than 16 per cent.

POLYAMINE-METHYLENE RESIN CAPSULES AND POWDERS:

Assay: (Acid-consuming Capacity) Accurately weigh the contents of 20 capsules or packets and transfer the equivalent of 1 Gm. of polyamine-methylene resin to a 250 ml. glass-stoppered flask. Determine the acid-consuming capacity as directed in the assay in the monograph for Polyamine-methylene Resin. Not less than 50 ml. of 0.1 *N* hydrochloric acid is consumed by the resin.

(Nitrogen) Accurately weigh the contents of 20 capsules or packets and transfer the equivalent of 1 Gm. of polyamine-methylene resin to a Kjeldahl flask. Determine the nitrogen content of the sample as directed in the assay in the monograph for Polyamine-methylene Resin. Each Gm. of nitrogen is equivalent to 6.67 Gm. of polyamine-methylene resin. The amount of polyamine-methylene resin present is not less than 90 nor more than 110 per cent of the labeled amount.

POLYAMINE-METHYLENE RESIN TABLETS (0.5 Gm. of polyamine-methylene resin per tablet):

Assay: (Acid-consuming Capacity) Accurately weigh 20 tablets, grind them to a fine powder in a mortar and transfer the equivalent of 1 Gm. of polyamine-methylene resin to a 250 ml. glass-stoppered flask. Determine the acid-consuming capacity as directed in the assay in the monograph for Polyamine-methylene Resin. Not less than 50 ml. of 0.1 *N* hydrochloric acid is consumed by the resin.

(Nitrogen) Accurately weigh 20 tablets, grind them to a fine powder in a mortar and transfer the equivalent of 1 Gm. of polyamine-methylene resin to a Kjeldahl flask. Determine the nitrogen content of the sample as directed in the assay in the monograph for Polyamine-methylene Resin. Subtract 0.0071 Gm. from the determined nitrogen to compensate for the gelatin content of the tablets. Each Gm. of nitrogen is equivalent to 6.67 Gm. of polyamine-methylene resin. The amount of polyamine-methylene resin present is not less than 90 nor more than 110 per cent of the labeled amount.

NATIONAL DRUG COMPANY, PHILADELPHIA 44

Capsules Resinat: 0.25 Gm.

Powder Resinat: 1 Gm. packages.

Tablets Resinat: 0.5 Gm.

SULFADIAZINE, SULFAMERAZINE AND SULFAMETHAZINE MIXTURES (See THE JOURNAL, December 24, 1949, page 1233).

The following dosage forms have been accepted:

CASIMIR FUNK LABORATORIES, INC., NEW YORK

Syrup Tri-Sulfameth: 118.3 cc., 473 cc., and 3.78 liter bottles: A syrup containing 0.1 Gm. each of sulfadiazine, sulfamerazine, and sulfamethazine and 1 Gm. of sodium citrate in each cc.

Tablets Tri-Sulfameth: 0.5 Gm.: Each tablet contains 0.165 Gm. each of sulfadiazine, sulfamerazine and sulfamethazine.

E. R. SQUIBB AND SONS, NEW YORK

Suspension Terfonyl: 473 cc. and 3.78 liter bottles: A suspension containing 0.1 Gm. each of sulfadiazine, sulfamerazine, and sulfamethazine in each cc. Preserved with 0.05 per cent each of methylparaben and propylparaben.

Tablets Terfonyl: 0.5 Gm.: Each tablet contains 0.167 Gm. each of sulfadiazine, sulfamerazine and sulfamethazine.

Council on Physical Medicine and Rehabilitation

REPORT OF THE COUNCIL

The Council on Physical Medicine and Rehabilitation has authorized publication of the following reports.

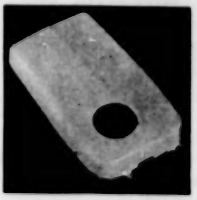
HOWARD A. CARTER, *Secretary.*

MAICO UE ATOMEER HEARING AID ACCEPTED

Manufacturer: The Maico Company, Inc., 21 North Third Street, Minneapolis 1.

This hearing aid consists of a three stage resistance-coupled amplifying system, housed in a case with plastic front and stainless steel back. The lower part of the back opens on a hinge to expose the battery compartment. A 1.5 volt A-battery and 22.5 volt B-battery are required.

Three types of magnetic receiver are offered, of conventional size and design but differing in electroacoustic properties.



Maico UE Atomeer Hearing Aid

The greatest dimensions of the case, exclusive of the metal clothing clips at the sides, are 98 by 58 by 23 mm. The weights are as follows: Case with contents except batteries, 114 Gm.; batteries, 71 Gm., and receiver and cord, 12.5 Gm.

Evidence of sturdy construction and good performance was obtained from sources acceptable to the Council. The Council on Physical Medicine and Rehabilitation voted to include the Maico UE Atomeer Hearing Aid in its list of accepted devices.

TECHNICON CARDIOGRAPH ACCEPTED

Manufacturer: Technicon Cardiograph Corp., 215 East 149th Street, New York 51.

The Technicon Cardiograph is a direct-writing electrocardiograph in which tracings are produced by three heated styluses writing on heat-sensitive paper.

It requires a source of 60 cycle alternating current at 110 volts and draws 1,000 watts (9 amperes). The apparatus measures 86 (height) by 52 by 84 cm. (34 by 21 by 33 inches) and weighs 181 Kg. (400 pounds); the shipping weight is 300 Kg. (660 pounds).

Technicon Cardiograph

Physical tests done in a laboratory acceptable to the Council indicated that this apparatus satisfied the published requirements for acceptance of electrocardiographs. Clinical trials also gave satisfactory results. The Council on Physical Medicine and Rehabilitation voted to include the Technicon Cardiograph in its list of accepted devices.

ARMOUR INSUFFLATOR ACCEPTED

Manufacturer: Armour Laboratories, Chicago 9.

The Armour Insufflator is a small device made of green and white plastic and designed for inhalation of medicaments which can be put into the device in the form of powder and then aspirated in the form of an aerosol or dust. The powder is provided in perforated gelatin capsules. The packaged device weighs about 30 Gm. (1 ounce) and measures 3 by 5 by 13 cm. (1¼ by 2 by 5¼ inches).

The Council obtained evidence that the device was of satisfactory construction and that it operated as claimed. The Council on Physical Medicine and Rehabilitation voted to include the Armour Insufflator in its list of accepted devices.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
535 N. DEARBORN ST. - - - CHICAGO 10, ILL.

Edited by
AUSTIN SMITH, M.D.

Associate Editor
JOHNSON P. HAMMOND, M.D.

Editor for Current Medical Literature, GEORGE HALPERIN, M.D.

Subscription price - - Twelve dollars per annum in advance
Cable Address - - - - "Medic, Chicago"

SATURDAY, JULY 22, 1950

PHYSICIANS FOR THE ARMED FORCES

By the time of the Pearl Harbor attack, in December 1941, some 11,000 civilian physicians had already left their homes and practices to furnish medical support to the expanding armed forces of this country. About one year later the number had increased to 42,000, all on a voluntary basis. At the same time several thousands of premedical and medical students were deferred from active military duty to colleges and universities throughout the country to complete their medical training with a view to being called to the armed forces later to serve as medical officers.

At this time there is evidence of probable need once again for additional medical officers to support our increasing defense establishment. Budgetary allowances have been increased for additional enlistments. The President of the United States has authorized an increase of these enlistments to augment the present troop strength and has stated that this authorization includes medical officers. There are many young physicians in the country whose services were deferred during the war in order that they might complete their medical education in either ASTP or V-12 programs, and many others have received their intern training in the hospitals of the armed forces.

The moral obligation that rests on them to serve the nation in this time of need is clear and unequivocal. While it is true that services of many other persons were deferred and that they received training in various specialties during the war, there were few groups other than physicians who could later utilize their training to advantage in civilian life.

URANIUM AND FLUORINE

The development of nuclear physics, having been dramatized by the explosion of several atomic bombs, has impressed everyone with the importance of radioactivity and the ionizing radiations. Physicians have watched these developments with much concern, anxious lest unexpected damage result from exposure to new kinds of rays and eager to use new diagnostic and therapeutic methods should these be forthcoming.

It is easy to become so preoccupied with developments in the physical aspects of this work that sight is lost of the equally important chemical and industrial aspects. This is forcibly brought to mind by recent volumes of the National Nuclear Energy Series, particularly the two books on the pharmacology and toxicology of uranium compounds, edited by Carl Voegtlin [1] and reviewed in THE JOURNAL.[2] The books of this series follow the best traditions of the modern "unclear" physics, in that their pages bristle with the signs and symbols of higher mathematics and much of the emphasis is, naturally, on the ionizing radiations which man has suddenly learned to control.

It turns out, however, that uranium is dangerous not only because it is radioactive and associated with other radioactive elements but also because it is a poison in the every day chemical or pharmacologic sense of the word. In the opinion of Kobert, uranium is the most poisonous of all metals when injected intravenously or subcutaneously. It can enter the body also by inhalation in the form of dusts and vapors. Modern American medicine can claim part of the credit for the fact that the numerous workmen who now handle uranium in the form of the ore, the metal itself or its compounds have been surprisingly well protected from both its physical and its chemical effects. This is the more remarkable because a large part of the processing of uranium is carried out with the uranium in the form of a volatile compound, the hexafluoride. This substance has to be kept out of contact with moist air; otherwise it is instantly hydrolyzed into the violently corrosive hydrofluoric acid and a finely divided solid compound of uranium that might easily be inhaled. For the initial preparation of uranium hexafluoride, it is necessary to work with the gaseous element, fluorine. This has long been known to every chemistry student as the most reactive of all the chemical elements. It is difficult to handle because it attacks and dissolves most of the materials of which containers, pipes and valves would ordinarily be made. Some of the devices and procedures necessary for safety are mentioned in this book. The gas, received in commercial cylinders at pressures of about 27 atmospheres, must be handled by a workman in a well isolated building constructed of noninflammable materials. There is a 15 cm. wall of concrete between the worker and the high pressure cylinder, and all containers and connections must be dry. Despite precautions, say the authors, "it is not infrequent that combustion of lines, valves and gages occur."

Considering the gigantic size of the gaseous (uranium hexafluoride) diffusion plant at Oak Ridge, Tenn., one marvels that such large quantities of so dangerous a substance can be handled by human beings without frequent major disasters. Fortunately the development of

1. Voegtlin, C., and Hodge, H. C.: Pharmacology and Toxicology of Uranium Compounds, New York, McGraw-Hill Book Company, Inc., 1949.
2. J. A. M. A. 142:140 (Jan. 14) 1950.

new processes has been paralleled at every step by the development of new safeguards for the health of workers. New manuals on protection against radiation hazards have been written, special training courses for physicians in this field have been given and are being given, and apparently the terrible loss of life and limb that occurred among the early workers with radium and the roentgen ray has been avoided in the case of uranium and the neutron beam. In the same way the loss of life and health associated with the earlier development of chemical industries, as described, for instance, by Alice Hamilton, seems to have been avoided in the development of the fluorine technology.

Here is an example of the cooperation of large numbers of highly trained persons in solving intricate problems relating to two of the most dangerous substances known to science. This again raises hopes for the success of mankind in its struggle against disease, insanity and death, even in the face of other looming menaces.

PROTEINS

The term "protein" was introduced into the scientific literature by the Dutch agricultural chemist Mulder in 1838. According to Sir Harold Hartley, as quoted by Vickery,[1] the term was suggested to Mulder by the Swedish chemist Berzelius. The word "protein" was derived from the Greek *proteios*, meaning of the first rank or position. "It appears to be," wrote Berzelius, "the primary or principal element in the animal nutrition which the plants prepare for the herbivora and which the latter in their turn furnish to the carnivora." Of the three principal organic constituents of living matter, proteins, fats and carbohydrates, the proteins are the most important, because of multiplicity of their biologic functions. The proteins represent nearly one half of the body's dry matter. Fruton [2] points out in a recent review that the structure and functions of the proteins constitute the fundamental problems of biochemistry.

All proteins are made principally of carbon, hydrogen, oxygen and nitrogen. Most proteins, as already noted by Mulder, contain also small amounts of sulfur or phosphorus. It is the nitrogen that is the distinguishing mark of a protein. The number of identified proteins is extremely large and is growing rapidly. Among the well recognized proteins are the myosin, the collagen, the keratin, the enzymes, the hormones and the genes. To identify a protein it is necessary to break down the cellular organization characteristic of life and to extract the protein with a suitable solvent. Many proteins have been obtained in the form of crystals which can be recrystallized at will, thus leading to further purification. The availability of crystalline proteins has for the first time given the biochemist reproducible material for the study of the chemical nature of these substances.

The proteins are macromolecules. To study them it is necessary to cleave the protein molecule into the smaller molecule of which it is composed—the amino acids. The protein is cleaved by treatment with acids or alkalis; because water enters into the reaction, the process is called hydrolysis. When the protein has been broken down into its amino acids, the chemist can then obtain some clues to its composition, because the atomic structures of the amino acids themselves have all been determined by the classical methods of organic chemistry.

The list of known amino acids from proteins has now grown to 22. During the past 80 years an intensive effort has been devoted to the development of experimental methods for the accurate quantitative determination of the relative amounts of the various amino acids formed by hydrolysis of a protein. Because the various amino acids are structurally similar in all respects except the nature of the side chain group, the problem has been to find chemical procedures that will select and isolate them on the basis of this rather subtle mark of identification. The most valuable contribution to the solution of this problem was the development of chromatography by the Russian botanist Michael Tswett.

Another important problem concerns the nature of the linkages between the individual amino acids. According to Emil Fischer and to Franz Hofmeister, the amino group is attached to the alpha-carbon of one amino acid and is joined to the carboxyl group attached to the alpha-carbon of another. The bond is called a "peptide linkage," and the hypothesis is known as the "peptide theory."

From these studies it appears that the protein molecule is a threadlike structure of several hundred amino acids linked to one another through peptide bonds and strung out to form a chain or several chains of considerable length cross linked by disulfide bridges. However, most of the known proteins are not threadlike or fibrous but globular.

The problem of protein structure, Fruton points out, involves the complicated task of establishing the arrangement of the amino acids in the peptide chain and the even more difficult questions as to the nature and position of the bonds that are broken during denaturation. The decisive discoveries in the study of the biologic synthesis of proteins still lie in the future. It is well to remember, says Fruton, that biochemistry is a relative newcomer among the scientific disciplines. Its growth has been meteoric and is exerting a decisive influence on the future development of all aspects of biology and their applications

1. Vickery, H. B.: The Origin of the Word Protein, Yale J. Biol. & Med. **22**: 387 (May) 1950.
2. Fruton, J. S.: Proteins, Scient. Am. **182**: 33 (June) 1950.

to medicine and agriculture. In the last analysis all the problems of biology meet in the unsolved problems concerning the structure and the mode of action of proteins.

Current Comment

SURVEY OF BLOOD BANKS

The first survey of all kinds of blood banks in the United States and possessions has been published by the Bureau of Medical Economic Research as Bureau Bulletin 75. This bulletin, which is a report to the Committee on Blood Banks of the American Medical Association, lists 1,648 blood banks; 1,636 of these are located in 951 cities of the 48 states and the District of Columbia. There are 1,571 hospital blood banks, 31 Red Cross regional blood centers and 46 nonhospital blood banks; they issued 60 per cent, 12 per cent and 8 per cent, respectively, of the 3.5 million units (pints) of whole blood used during 1949. For the purpose of this survey the Committee on Blood Banks tentatively decided to classify as a blood bank any institution which stores blood, whether or not it also procures and processes blood. The ten conclusions and other highlights of the survey can be found in the report of the Committee on Blood Banks to the House of Delegates, which appears in this issue of THE JOURNAL (page 1078). Any physician may obtain a copy of Bulletin 75 by writing to the Bureau of Medical Economic Research, American Medical Association, 535 North Dearborn Street, Chicago 10.

ADDITIONS TO LIST OF FOREIGN MEDICAL SCHOOLS

In February the Council on Medical Education and Hospitals and the Executive Council of the Association of American Medical Colleges issued the first preliminary list of foreign medical schools whose graduates they recommended be considered on the same basis as graduates of approved medical schools in the United States. It was pointed out that the list would be supplemented from time to time as information was compiled for other schools. Elsewhere in this issue (page 1114) is the announcement of six additional schools that the two Councils voted to include in this list at their recent meetings. The six additional schools include five schools in Switzerland and one in Lebanon. In listing foreign schools the Councils have wisely insisted that graduates from these schools fulfil all the educational requirements for licensure in the country in which the school from which they graduate is located. Only by insisting on this principle can state boards and other organizations be certain that graduates of foreign schools have had complete training that meets fully the standards of the official agencies charged with regulating medical education in the various foreign countries whose medical schools have been listed. Since the list is still a preliminary one and other institutions will undoubtedly be added in the future, the position of the Council and the Executive Council with respect to schools not on this list remains the same. These Councils neither approve nor disapprove these schools but must leave to individual institutions and organizations in the United States the decision whether they will accept graduates of these schools on the same basis that they accept graduates of approved medical schools in the United States.

RADIATION BACTEREMIA

Chrom,[1] Warren,[2] Lawrence[3] and others have described infection as one of the features of radiation sickness. Miller[4] and his associates of the Department of Medicine, University of Chicago, have tested this by periodic blood and splenic cultures of irradiated animals. A series of 585 adult male mice was exposed to 600 roentgen units. Of these 305 died within the next 15 days. During this period living mice were etherized at daily intervals in groups of 20 and bacterial counts made of the heart blood and splenic emulsions. In the irradiated group 1 out of every 20 mice had a positive blood and spleen culture during the first five days after roentgen exposure, increasing to 17 positive cultures per 20 by the ninth day and decreasing to 6 per 20 by the fourteenth day. The highest daily incidence of positive cultures (85 per cent) occurred on the ninth day, which was also the day on which the greatest number died. Seventy per cent of the positive cultures contained more than 50 bacteria per 0.05 cc., one third of them containing bacteria too numerous to count. A second series of 1,042 mice was exposed to 450 roentgen units. Of these 447 died by the eighteenth day. The living were killed and cultured in groups of 35 at daily intervals. Positive blood and splenic cultures were only occasionally recorded during the first five days but increased to 54 per cent by the tenth day, then decreased to 17 per cent by the eighteenth day. In approximately 70 per cent of the positive cultures there developed more than 50 colonies per small drop. There were too many colonies to count in only a fifth of these. The bacteremia was thus not as severe as in the 600 r series. Control cultures made with 52 normal mice of the same stock yielded only negative results. In over 90 per cent of the cases of both series the bacteremia was caused by a single organism. In no case were more than two bacterial species present. With the exception of Pseudomonas all the bacteria were identified as normal or occasional inhabitants of the large intestine. The lower intestine is thus the presumptive reservoir from which invasion of the blood stream occurs. Multiplication presumably occurs in the blood stream.

1. Chrom, S. A.: Acta radiol. **16**:641, 1935.
2. Warren, S.: Cancer Research **6**:449, 1946.
3. Lawrence, J. H., and Tennant, R.: J. Exper. Med. **68**:667, 1937.
4. Miller, C. P.; Hammond, C. W., and Tompkins, M.: Science **111**:540 (May 19) 1950.

PROCEEDINGS OF THE SAN FRANCISCO SESSION

MINUTES OF THE ANNUAL SESSION OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN SAN FRANCISCO, JUNE 26-30, 1950

HOUSE OF DELEGATES

Monday Afternoon, June 26

The House reconvened at 1:45 p.m. with the Speaker, Dr. F. F. Borzell, presiding.

Supplementary Report of Board of Trustees

REPORT OF COMMITTEE ON HOSPITALS AND THE PRACTICE OF MEDICINE

Dr. Louis H. Bauer, Chairman, Board of Trustees, presented the following report, which was referred to the Reference Committee on Reports of Board of Trustees and Secretary:

In June 1949, the House of Delegates approved a report, as revised by the Reference Committee, submitted by the Committee on Hospitals and the Practice of Medicine. Subsequent to this meeting and after receiving a legal opinion from the Association's general counsel, the Board of Trustees referred the entire report back to the House with specific recommendations concerning certain portions of the report.

In December 1949, the House of Delegates approved the following motion in regard to this report:

". . . that in the interests of maintaining high professional standards and protecting the public health, the House of Delegates reaffirms the philosophy underlying and the principles enunciated in the Hess Committee report, and that in view of the possible legal technicalities, the activation of the Hess Committee report be deferred until after the next meeting of the House of Delegates and that between this and the next meeting of the House of Delegates the original report be re-referred to the original committee or reasonable fascimile thereof and that the Committee be instructed to consider ways and means of activating the original report in accordance with the principles expressed therein and in accordance with legal considerations which must be present."

In view of this action of the House of Delegates, the Correlating Committee on Extension of Hospitals and Other Facilities of the Council on Medical Service, consisting of the original members of the Committee on Hospitals and the Practice of Medicine plus two additional members appointed by the Council, has undertaken to restudy the problem and rewrite the report in such a manner as to meet the directives of the House of Delegates.

In addition to studying the original report, the Committee requested expressions of opinion on the part of the various specialty groups and of the various hospital associations and also granted them permission to have representatives appear before the Committee if they so desired.

The Committee wishes to report again that insofar as it can determine, on the basis of a study made by the Bureau of Legal Medicine and Legislation of the American Medical Association, as a matter of law the corporate practice of medicine is illegal in most states. In almost all instances the classic example given by the courts of the type of corporate practice of a profession that is illegal is the instance in which a corporation hires a professional man and then sells his services to the public on a fee basis for the profit of the corporation. Such exceptions as there are refer to statutory legislation in several states permitting certain modifications of this general law. It must also be remembered that fee splitting with a corporation is just as unethical as fee splitting with another physician.

In addition to being guided by the laws of the various states, physicians in their relationships with hospitals must be guided by the Principles of Medical Ethics of the American Medical Association. Those sections of the Principles which have a distinct bearing on these relationships are as follows:

Chapter I. Sec. 3. "Groups and Clinics—The ethical principles actuating and governing a group or clinic are exactly the same as those applicable to the individual. As a group or clinic is composed of individual physicians, each of whom, whether employer, employee or partner, is subject to the principles of ethics herein elaborated, the uniting into a business or professional organization does not relieve them either individually or as a group from the obligation they assume when entering the profession."

Chapter III. Article VI. Sec. 2. "Conditions of Medical Practice—A physician should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patients concerned might be deprived of immediately necessary care."

Chapter III. Article VI. Sec. 3. "Contract Practice—Contract practice as applied to medicine means the practice of medicine under an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization, political subdivision or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for a salary or for a fixed rate per capita.

"Contract practice per se is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these Principles of Medical Ethics or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered."

Chapter III. Article VI. Sec. 6. "Purveyal of Medical Service—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people."

In conclusion, the Principles of Medical Ethics states: "These principles of medical ethics have been and are set down primarily for the good of the public and should be observed in such a manner as shall merit and receive the endorsement of the community . . . ."

Another matter which the Committee believes pertinent as regards the problem of physician-hospital relationships is the set of principles prepared by the Council on Professional Practice of the American Hospital Association (Robin C. Buerki, M.D., Chairman) and approved in 1946 by the Board of Trustees of the American Hospital Association, the American College of Surgeons, representatives of the various specialty groups (anesthesiology, radiology, and pathology), and the Council on Medical Education and Hospitals of the American Medical Association.

These Principles of Relationship Between Hospitals, Radiologists, Anesthetists and Pathologists emphasize that the primary obligation of both physicians and hospitals is to serve the best interest of the patients. This the Committee believes leads to a fundamental principle that the decision as to the ethical or unethical nature of practice must be based on the ultimate effect for good or ill on the public as a whole. These principles also recognized the basic fact that all of the various questions involved in the relationship between physicians and hospitals, both legal and ethical, must be considered in the first instance at the local level because of the various differences which of necessity exist in the many sections of the country. Again, the Committee

to medicine and agriculture. In the last analysis all the problems of biology meet in the unsolved problems concerning the structure and the mode of action of proteins.

Current Comment

SURVEY OF BLOOD BANKS

The first survey of all kinds of blood banks in the United States and possessions has been published by the Bureau of Medical Economic Research as Bureau Bulletin 75. This bulletin, which is a report to the Committee on Blood Banks of the American Medical Association, lists 1,648 blood banks; 1,636 of these are located in 951 cities of the 48 states and the District of Columbia. There are 1,571 hospital blood banks, 31 Red Cross regional blood centers and 46 nonhospital blood banks; they issued 60 per cent, 12 per cent and 8 per cent, respectively, of the 3.5 million units (pints) of whole blood used during 1949. For the purpose of this survey the Committee on Blood Banks tentatively decided to classify as a blood bank any institution which stores blood, whether or not it also procures and processes blood. The ten conclusions and other highlights of the survey can be found in the report of the Committee on Blood Banks to the House of Delegates, which appears in this issue of THE JOURNAL (page 1078). Any physician may obtain a copy of Bulletin 75 by writing to the Bureau of Medical Economic Research, American Medical Association, 535 North Dearborn Street, Chicago 10.

ADDITIONS TO LIST OF FOREIGN MEDICAL SCHOOLS

In February the Council on Medical Education and Hospitals and the Executive Council of the Association of American Medical Colleges issued the first preliminary list of foreign medical schools whose graduates they recommended be considered on the same basis as graduates of approved medical schools in the United States. It was pointed out that the list would be supplemented from time to time as information was compiled for other schools. Elsewhere in this issue (page 1114) is the announcement of six additional schools that the two Councils voted to include in this list at their recent meetings. The six additional schools include five schools in Switzerland and one in Lebanon. In listing foreign schools the Councils have wisely insisted that graduates from these schools fulfil all the educational requirements for licensure in the country in which the school from which they graduate is located. Only by insisting on this principle can state boards and other organizations be certain that graduates of foreign schools have had complete training that meets fully the standards of the official agencies charged with regulating medical education in the various foreign countries whose medical schools have been listed. Since the list is still a preliminary one and other institutions will undoubtedly be added in the future, the position of the Council and the Executive Council with respect to schools not on this list remains the same. These Councils neither approve nor disapprove these schools but must leave to individual institutions and organizations in the United States the decision whether they will accept graduates of these schools on the same basis that they accept graduates of approved medical schools in the United States.

RADIATION BACTEREMIA

Chrom,[1] Warren,[2] Lawrence[3] and others have described infection as one of the features of radiation sickness. Miller[4] and his associates of the Department of Medicine, University of Chicago, have tested this by periodic blood and splenic cultures of irradiated animals. A series of 585 adult male mice was exposed to 600 roentgen units. Of these 305 died within the next 15 days. During this period living mice were etherized at daily intervals in groups of 20 and bacterial counts made of the heart blood and splenic emulsions. In the irradiated group 1 out of every 20 mice had a positive blood and spleen culture during the first five days after roentgen exposure, increasing to 17 positive cultures per 20 by the ninth day and decreasing to 6 per 20 by the fourteenth day. The highest daily incidence of positive cultures (85 per cent) occurred on the ninth day, which was also the day on which the greatest number died. Seventy per cent of the positive cultures contained more than 50 bacteria per 0.05 cc., one third of them containing bacteria too numerous to count. A second series of 1,042 mice was exposed to 450 roentgen units. Of these 447 died by the eighteenth day. The living were killed and cultured in groups of 35 at daily intervals. Positive blood and splenic cultures were only occasionally recorded during the first five days but increased to 54 per cent by the tenth day, then decreased to 17 per cent by the eighteenth day. In approximately 70 per cent of the positive cultures there developed more than 50 colonies per small drop. There were too many colonies to count in only a fifth of these. The bacteremia was thus not as severe as in the 600 r series. Control cultures made with 52 normal mice of the same stock yielded only negative results. In over 90 per cent of the cases of both series the bacteremia was caused by a single organism. In no case were more than two bacterial species present. With the exception of Pseudomonas all the bacteria were identified as normal or occasional inhabitants of the large intestine. The lower intestine is thus the presumptive reservoir from which invasion of the blood stream occurs. Multiplication presumably occurs in the blood stream.

1. Chrom, S. A.: Acta radiol. **16**:641, 1935.
2. Warren, S.: Cancer Research **6**:449, 1946.
3. Lawrence, J. H., and Tennant, R.: J. Exper. Med. **66**:667, 1937.
4. Miller, C. P.; Hammond, C. W., and Tompkins, M.: Science **111**: 540 (May 19) 1950.

PROCEEDINGS OF THE SAN FRANCISCO SESSION

MINUTES OF THE ANNUAL SESSION OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN SAN FRANCISCO, JUNE 26-30, 1950

HOUSE OF DELEGATES

Monday Afternoon, June 26

The House reconvened at 1:45 p.m. with the Speaker, Dr. F. F. Borzell, presiding.

Supplementary Report of Board of Trustees

REPORT OF COMMITTEE ON HOSPITALS AND THE PRACTICE OF MEDICINE

Dr. Louis H. Bauer, Chairman, Board of Trustees, presented the following report, which was referred to the Reference Committee on Reports of Board of Trustees and Secretary:

In June 1949, the House of Delegates approved a report, as revised by the Reference Committee, submitted by the Committee on Hospitals and the Practice of Medicine. Subsequent to this meeting and after receiving a legal opinion from the Association's general counsel, the Board of Trustees referred the entire report back to the House with specific recommendations concerning certain portions of the report.

In December 1949, the House of Delegates approved the following motion in regard to this report:

". . . that in the interests of maintaining high professional standards and protecting the public health, the House of Delegates reaffirms the philosophy underlying and the principles enunciated in the Hess Committee report, and that in view of the possible legal technicalities, the activation of the Hess Committee report be deferred until after the next meeting of the House of Delegates and that between this and the next meeting of the House of Delegates the original report be re-referred to the original committee or reasonable fascimile thereof and that the Committee be instructed to consider ways and means of activating the original report in accordance with the principles expressed therein and in accordance with legal considerations which must be present."

In view of this action of the House of Delegates, the Correlating Committee on Extension of Hospitals and Other Facilities of the Council on Medical Service, consisting of the original members of the Committee on Hospitals and the Practice of Medicine plus two additional members appointed by the Council, has undertaken to restudy the problem and rewrite the report in such a manner as to meet the directives of the House of Delegates.

In addition to studying the original report, the Committee requested expressions of opinion on the part of the various specialty groups and of the various hospital associations and also granted them permission to have representatives appear before the Committee if they so desired.

The Committee wishes to report again that insofar as it can determine, on the basis of a study made by the Bureau of Legal Medicine and Legislation of the American Medical Association, as a matter of law the corporate practice of medicine is illegal in most states. In almost all instances the classic example given by the courts of the type of corporate practice of a profession that is illegal is the instance in which a corporation hires a professional man and then sells his services to the public on a fee basis for the profit of the corporation. Such exceptions as there are refer to statutory legislation in several states permitting certain modifications of this general law. It must also be remembered that fee splitting with a corporation is just as unethical as fee splitting with another physician.

In addition to being guided by the laws of the various states, physicians in their relationships with hospitals must be guided by the Principles of Medical Ethics of the American Medical Association. Those sections of the Principles which have a distinct bearing on these relationships are as follows:

Chapter I. Sec. 3. "Groups and Clinics—The ethical principles actuating and governing a group or clinic are exactly the same as those applicable to the individual. As a group or clinic is composed of individual physicians, each of whom, whether employer, employee or partner, is subject to the principles of ethics herein elaborated, the uniting into a business or professional organization does not relieve them either individually or as a group from the obligation they assume when entering the profession."

Chapter III. Article VI. Sec. 2. "Conditions of Medical Practice—A physician should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patients concerned might be deprived of immediately necessary care."

Chapter III. Article VI. Sec. 3. "Contract Practice—Contract practice as applied to medicine means the practice of medicine under an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization, political subdivision or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for a salary or for a fixed rate per capita.

"Contract practice per se is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these Principles of Medical Ethics or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered."

Chapter III. Article VI. Sec. 6. "Purveyal of Medical Service—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people."

In conclusion, the Principles of Medical Ethics states: "These principles of medical ethics have been and are set down primarily for the good of the public and should be observed in such a manner as shall merit and receive the endorsement of the community . . . ."

Another matter which the Committee believes pertinent as regards the problem of physician-hospital relationships is the set of principles prepared by the Council on Professional Practice of the American Hospital Association (Robin C. Buerki, M.D., Chairman) and approved in 1946 by the Board of Trustees of the American Hospital Association, the American College of Surgeons, representatives of the various specialty groups (anesthesiology, radiology, and pathology), and the Council on Medical Education and Hospitals of the American Medical Association.

These Principles of Relationship Between Hospitals, Radiologists, Anesthetists and Pathologists emphasize that the primary obligation of both physicians and hospitals is to serve the best interest of the patients. This the Committee believes leads to a fundamental principle that the decision as to the ethical or unethical nature of practice must be based on the ultimate effect for good or ill on the public as a whole. These principles also recognized the basic fact that all of the various questions involved in the relationship between physicians and hospitals, both legal and ethical, must be considered in the first instance at the local level because of the various differences which of necessity exist in the many sections of the country. Again, the Committee

believes that this gives us another fundamental principle, that, consonant with established principles of medical ethics, local conditions must decide the various arrangements and conditions of practice in reference to both hospital facilities and medical personnel and their relationships.

One of the factors that have aggravated physician-hospital relationships is the inclusion of medical services in the contracts of voluntary hospital service plans. The medical profession is fostering voluntary health insurance, and we believe that nothing should be done to disturb this very important and essential program. However, the American Medical Association has reaffirmed many times through its then Bureau of Medical Economics, its Judicial Council and the House of Delegates the principle that hospital service plans should exclude all medical services, and the contract provisions of such plans should be limited exclusively to hospital services. At the same time, so that there would be no misunderstanding as to which services should or should not be included, the House of Delegates has stated that ". . . if hospital service is limited to include only hospital room accommodations, such as bed, board, operating room, medicines, surgical dressings and general nursing care, the distinction between hospital service and medical service will be clear."* Furthermore, past actions of the House of Delegates give the Committee every reason to reiterate that radiology, anesthesiology, pathology and physiatry constitute the practice of medicine.

In order to initiate a method for remedying this situation, it is recommended that the Blue Shield and Blue Cross Commissions be requested to cooperate to the extent of writing all new contracts in such a manner that Blue Shield will cover insurable medical services and Blue Cross will cover insurable hospital services. Your Committee believes that the professional and hospital authorities and the voluntary prepayment plans will cooperate in furthering these recommendations. In addition, it also believes that the commercial insurance companies should be requested to write their policies with this principle of the separation of hospital and medical services in mind.

The Committee believes that since the physician and hospital are interdependent, it is incumbent on both to be interested in all phases of their scientific and financial relationships. This means that the professional staff of the hospital has very definite responsibilities toward not only other members of the professional staff, whether active or courtesy, but also toward hospital management. The recommendations of the staff concerning medical matters are usually accepted by the management of the hospital through its board of managers or trustees. It must also be remembered that to be approved for residencies in specialties by the American Medical Association and the American College of Surgeons, certain requirements are mandatory to the institution, among them adequate pathologic and radiologic coverage. As a rule, the staff of a hospital elects an executive committee or works under an appointed executive committee to advise the lay officers of the institution on purely professional matters, and recommends who may or may not use the institution for professional work. Unfortunately, in many instances, the financial problems of the lay hosiptal management have been no affair of the staff or of its professional executive committee. This is wrong and probably the cause of most of the differences of opinion between physicians and hospital management. The financial problems of an institution in which a physician does his professional work are definitely of importance to him and to the professional staff, and the proper consideration must be given to these problems if the hospital is to work efficiently and remain the workshop of the physician, and without proper facilities the services rendered to the public are in jeopardy and these public services are the all-important function of both hospital and staff.

Every professional man on the appointed staff should have a voice in the professional management of the institution. The pathologist, roentgenologist, anesthesiologist and physiatrist, as well as the other professional staff members, should have equal standing as active members of the staff with all the rights and privileges pertaining to other members of the staff of equal standing. The chiefs of these departments should be nominated and appointed in the same manner as are the chiefs of other major departments in the same hospital.

The revised Principles of Medical Ethics has been written with all of these various factors in mind and is broad enough to cover all possible ethical physician-hospital relationships. The Constitution and By-Laws of the American Medical Association distinctly cover methods of procedure for all persons who have a complaint so that they may approach the Judicial Council. The functions of that Council are specifically delineated.

For the purpose of activating this report, the Committee has the following suggestions:

In the event of a controversy between physician and physician, or physician and hospital management, on these problems, it is recommended that, since local conditions must be taken into consideration, these problems be resolved insofar as possible at the local level.

The Committee believes that there can be no exploitation of the doctor or of the hospital if everyone concerned in management and on the professional staff will work together to supply the greatest possible good quality medical and hospital services to the public. In any given controversy, every effort should first be made to settle the matter at the staff-management level. In case of failure to settle the controversy at this level, assistance of the county medical society should be requested. If, then, it cannot be resolved it should be submitted to a committee of the state medical association for advice and recommendation. If problems cannot be solved at the staff-management level, through the county medical society, or through the state medical association, the Constitution and By-Laws of the American Medical Association provides that ". . . the (Judicial) Council may, at its discretion, investigate general professional conditions and all matters pertaining to the relations of physicians to one another and to the public, and make such recommendations to the House of Delegates or the constituent association as it deems necessary."

To implement the settlement of such controversies, it is recommended that each component county medical society and each constituent state and territorial medical association appoint a Committee on Hospital and Professional Relations. This committee should be available to receive complaints from any physician, hospital, medical organization or any other interested person or group with reference to professional or economic relations existing between doctors of medicine and hospitals. On receipt of such a complaint by such a committee the matter should be investigated and acted on in such manner as will best effect adjustment of the complaint.

Your Committee has already communicated with every state in the Union requesting that a Committee on Hospital and Professional Relations be created at the state level to assist similar committees at the county society level in solving these disagreements wherever they arise. Many states have already established these committees, and they are functioning.

Another approach that should not be neglected in activating this report is that of the local and state hospital associations. Most of the states and many communities have hospital associations providing direct representation for the hospitals within their areas. It seems reasonable to assume that state medical associations and component county medical societies could well effect liaison with these organizations in the settlement of problems involving physician-hospital relationships.

The Committee also believes that the American Medical Association should maintain continued liaison with the American Hospital Association either through this Committee or through some special committee appointed for that purpose.

To assist further in the activation of this report the Committee makes the following suggestions, inculcating the philosophy of the McKittrick Report, as additional guides to physicians, county medical societies and state medical associations:

1. That the costs of medical services rendered in hospitals be separated from the non-medical costs, as can be done by existing and accepted methods of cost accounting, and that they appear thus separated on the statement submitted to the patient.

2. That a physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation

* Proceedings of the San Francisco Session of the House of Delegates, 1938, page 31.

of the services of the physician for the financial profit of the agency concerned. Contrariwise the physician should not exploit the hospital. It is the sense of this Committee that neither hospital nor physician rendering the service shall exploit the patient or each other.

3. That fees for medical services which are collected by the hospital should be established by joint action of a representative committee of the staff to include the head of the department, and the administrator and the governing body of the hospital.

4. That the basis of financial arrangement between hospital and physician may be salary, commission, fees, or such other method as will best meet the local situation, consonant with the Principles of Medical Ethics and with due regard to the needs of the patient, the community, the hospital and the physician.

Finally, in order that progress regarding the activation of the report may be followed, the Committee suggests that the House of Delegates authorize this Committee to keep in touch with the committees on hospital and professional relations appointed by the county medical societies and the state medical associations and report on such progress at the next Annual Meeting.

Respectfully submitted,

ELMER HESS, Chairman.
WALTER E. VEST.
RALPH A. JOHNSON.
E. DWIGHT BARNETT.
W. G. PHIPPEN.
JOHN W. CLINE.

SUPPLEMENTARY REPORT OF THE COMMITTEE ON HOSPITALS AND THE PRACTICE OF MEDICINE

The Committee believes that if the following pattern were followed the possibility of solving any controversy between physician and hospital would be greatly improved:

When a physician believes he has a legitimate complaint against hospital management, he should first attempt to solve the difficulty at the staff level, and it is incumbent on the medical staff to assist in arriving at a fair and proper solution.

If no solution is reached at this level, the physician should appeal to the appropriate committee of his county medical society for advice and assistance. The county medical society committee should develop methods for contacting hospitals, management and boards, as well as local associations representing hospitals, in order that all sides of the controversy may be understood and personality difficulties minimized.

When a solution seems impossible through the good offices of the county medical society, mechanisms should be available for presentation of the matter to the state medical association of which the physician is a member. Here again, for the purpose of receiving all available facts and opinion, the state medical association should develop liaison with the state hospital association.

To facilitate the consideration and mediation of physician-hospital controversies, specific authorization to handle such matters should be given to some committee of both county and state medical societies. In the larger county societies and the state associations this function could be best carried out through a special committee created for just this purpose. It should be the function of such committees to mediate differences in the light of the existing state laws, the Principles of Medical Ethics and the best interests of the patients.

The services of the Correlating Committee on Extension of Hospitals and Other Facilities of the Council on Medical Service, working with a similar committee of the American Hospital Association, should be available to study and assist in solving physician-hospital problems which seem unsolvable at the local and state levels. For formal opinion or adjudication, however, the portfolio should be presented to the Judicial Council.

Respectfully submitted,

ELMER HESS, Chairman.
WALTER E. VEST.
RALPH A. JOHNSON.
E. DWIGHT BARNETT.
W. G. PHIPPEN.
JOHN W. CLINE.

Report of Committee on Chronic Diseases

Dr. Robertson Ward, Chairman, presented the following report:

In accordance with the action of the House of Delegates at the Washington session, a Committee on Chronic Diseases was established and the Speaker of the House appointed the following members to serve on that committee:

Robertson Ward, Chairman.
Stanley H. Osborn.
George A. Unfug.
C. F. Strosnider.
Charles H. Phifer.
Howard B. Goodrich.
Herbert P. Ramsey.

The resolution creating this committee directed that it (1) be constantly in touch with the United States Public Health Service and all other government agencies functioning in the chronic disease field and act as liaison between the American Medical Association and the United States Public Health Service; (2) develop and submit to the House a proposed basic public policy in the matter of chronic diseases or any extension of public health function, and (3) report progress to each session of this House. The following is a progress report in compliance with the third function of this committee noted above:

Immediately on appointment of the committee it was arranged for each member to receive information through the Washington Office of the American Medical Association concerning the laws relating to the United States Public Health Service and certain other information from the Federal Security Agency concerning reorganization of the Public Health Service, the establishment of a Chronic Disease Division, plans for multiphasic screening, other pertinent reports on the prevalence of chronic disabling illness and, most important, a breakdown of the proposed budget of the Public Health Service in relation to chronic diseases.

In analyzing and interpreting this last report the services of the Bureau of Medical Economic Research were invaluable.

It appears to a majority of the committee that the pattern for expansion of the United States Public Health Service in the field of chronic disease is fairly clear. It runs about as follows: First, a whole series of existing laws that do not specifically mention chronic disease are woven into an administrative regulation or directive that establishes a new bureau; secondly, the new bureau thus established without the benefit of legislative creation proceeds to get itself included in the next annual budget so that it has some funds, and by inclusion in the budget it changes from a "de facto" bureau to a "de jure" bureau; thirdly, it proceeds to study and plan ways and means of increasing its functions and finding "public needs" for its expansion; fourthly, it then for the first time goes directly to Congress for a basic law putting it in control of the particular activity involved and giving it the force of law to make its work effective.

The chronic disease program of the United States Public Health Service has now reached phase No. 2 and is rapidly getting to phase No. 3. If medicine waits until the government bureau has completed the building of its case before approaching Congress, it is liable to be too late. Medicine will then be in the position of an obstructionist.

Although your committee is not ready, as yet, to outline a policy designed to meet this situation it would like to point the way and outline the steps to be taken before such a policy can be formulated. There has been some suggestion of conflict or reduplication of the functions of this committee and the Commission on Chronic Illness. We would like to emphasize that no such conflict exists but that rather there is an opportunity for mutual cooperation between the two bodies.

In conference with Dr. Morton I. Levin, director of the Commission it has been pointed out by him that the Commission is a temporary agency and its objectives are (1) to define and study the problems arising from chronic illness in all age groups, including social as well as medical aspects; (2) to assemble, analyze and make available information regarding existing programs and studies such as those made in California,

Connecticut and New York; (3) to study methods for modifying the present pessimistic attitudes toward chronic illness prevailing among public and professional groups; (4) to study methods for achieving closer working relationships between programs and agencies dealing with specific chronic diseases; (5) to stimulate or carry out needed research in community organization for meeting the needs of the chronically ill; (6) to stimulate in every state and locality a well rounded plan for prevention and control of chronic disease and for the care and rehabilitation of the chronically ill, and (7) to issue reports and suggested programs for action as a result of its surveys and studies.

The Commission's staff has suggested that the Committee on Chronic Diseases can greatly assist the Commission (*a*) by pointing out needed areas for study and critical appraisal and (*b*) by informing the Commission of new proposals, programs or plans on the part of professional groups, voluntary insurance organizations, voluntary health agencies and governmental health agencies which require appraisal or study, especially with regard to the economic aspects of chronic disease care.

With this your committee is in agreement. It feels there is no conflict with objectives of the Commission. In order to carry out the objectives of the committee it is suggested that there is a great need for technically skilled analysis of all proposed congressional appropriations affecting medicine such as the data furnished the committee by the American Medical Association's Bureau of Economic Research. It is far beyond the ability of the physician members of the committee to read, understand and analyze a federal budget even if they were in a position so to do.

It is hoped that with the proper mechanisms at hand the committee will be able to fulfil the other two objectives outlined in the resolution creating it. This is an especially important program in view of the aging population of the United States and the present rapid trend to paternalism in the federal government.

It is further suggested that liaison be established between this committee and the Commission on Chronic Illness by having a member of the commission also a member of this committee.

The Committee was continued on motion of Dr. Val H. Fuchs, Louisiana, duly seconded and carried.

NEW BUSINESS

Resolution of Sympathy to Dr. and Mrs. James E. Paullin

Dr. Allen H. Bunce on behalf of the delegates from Georgia, presented the following resolution, which was adopted on motion of Dr. Bunce, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried:

WHEREAS, On Sunday afternoon, June 4, while Dr. and Mrs. James E. Paullin were returning to Atlanta from their country home they were painfully and seriously injured when their car was struck by an oncoming car which was trying to pass a truck on a hill; and

WHEREAS, Both Dr. Paullin, one of our past presidents, who has done such outstanding work for the American Medical Association and has contributed so greatly to the welfare of the American people, and his charming and gracious wife are still confined to the Piedmont Hospital in Atlanta and probably will be so confined for several more weeks; therefore be it

Resolved, That this House of Delegates on behalf of the American Medical Association extend to Dr. and Mrs. Paullin its sincerest sympathy in their great suffering and best wishes for a speedy and complete recovery, and that a telegram to this effect be forwarded to them by the Secretary.

Resolutions on Medical Care of Veterans

Dr. Allen H. Bunce, for the Georgia delegation, presented the following resolutions, which were referred to the Reference Committee on Reports of Board of Trustees and Secretary:

The membership of the Fulton County Medical Society consists of physicians legally qualified for the practice of medicine. Many of these physicians served in the Armed Forces during World War I and/or World War II as officers in the Medical Corps, and many others voluntarily gave of their services in other capacities for the defense of our country.

Those of us who are members of the Fulton County Medical Society feel that any veteran with a service-connected disability not only deserves but should receive at the hands of the government all necessary hospitalization, medical care, domiciliary care and rehabilitation which is necessary for his treatment in an effort to make him again a useful citizen.

We also feel in the case of a veteran with non-service-connected disabilities, that in the event such veteran should need emergency medical care but is unable to afford the necessary hospital and medical expense connected with this care, or in the event he should have some chronic illness, such as tuberculosis, cancer, neuropsychiatric disorder, rheumatoid arthritis, etc., which would require prolonged hospitalization, even though he is financially able to bear the expense of a short illness, yet a prolonged illness might considerably drain his available resources, we believe that he too should be furnished hospital and medical care without charge.

From observation, there seems to be a growing tendency for Veterans Administration hospitals to admit for treatment patients with non-service-connected disabilities who are able financially to pay for hospitalization and for medical service. It is currently reported that approximately 65 per cent to 85 per cent of the patients who now occupy beds in veterans administration hospitals are there because of non-service-connected disabilities. It is believed that many of these patients are able to pay for hospitalization and for medical care.

It is realized that when veterans with non-service-connected disabilities enter the Veterans Administration hospitals for treatment, they, on oath, state they are unable to pay for hospitalization or medical treatment. On the application for admission to a Veterans Administration hospital they sign the following: "Any person who shall knowingly make or cause to be made, or conspire, combine, aid or assist in, agree to, arrange for, or in anywise procure the making or presentation of a false or fraudulent affidavit, declaration, certificate, statement, voucher, or paper, or writing purporting to be such, concerning any claim for benefits under this title, shall forfeit all rights, claims, and benefits under this title, and in addition to any and all other penalties imposed by law, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than $1,000 or imprisonment for not more than 1 year, or both."

In view of these statements, the following resolutions are offered for consideration:

WHEREAS, It is believed that the members of the Fulton County Medical Society who render most of the medical service to the veterans at the Lawson Veterans Administration Hospital may or may not be familiar with the regulations concerning the conditions on which veterans are admitted to this facility; and

WHEREAS, Numerous regulations have been promulgated from time to time governing the admission of veterans applying for free treatment at the veterans hospitals, and that this demand for free service seems to be increasing; and

WHEREAS, The members of the Fulton County Medical Society as taxpayers to the federal, state, county, and local governments, and as physicians rendering service to veterans admitted to this facility, it seems reasonable that members of the medical society should be informed of the regulations and methods employed for the free care of veterans with non-service-connected disabilities who are financially able to defray the expense of hospital and medical care; therefore be it

Resolved, That the members of the Fulton County Medical Society who are opposed to the socialization of medicine go on record as opposing the present method of treating veterans with non-service-connected disabilities under Government control and at Government expense, irrespective of the ability of the patient to pay, as a step toward the further establishment of the welfare state; and be it further

Resolved, That the members of the Fulton County Medical Society, who earn a living from the practice of medicine and who are being deprived of rendering medical service to some of these patients who are able to pay for such service, request that the President of the society, after consultation with the board of trustees, appoint a committee of three to discuss with the manager of the Lawson Veterans Administration Hospital the practices above described, and that this committee be requested to report to the society the results of the conference; and be it further

Resolved, That a copy of this resolution be sent to the Dean of Emory University Medical School, which sponsors the professional personnel of the Lawson Veterans Administration Hospital; and therefore be it

Resolved, That the house of delegates of the Medical Association of Georgia confirms the action of the Fulton County Medical Society regarding the medical care of veterans; and be it further

Resolved, That our delegates to the American Medical Association are hereby instructed regarding these resolutions and are requested to work for their approval.

(Unanimously adopted by The Medical Association of Georgia.)

Resolutions on Manual on the Establishment and Operation of a Department of General Practice in Hospitals

Dr. H. B. Mullholland, Virginia, presented the following resolutions, which were referred to the Reference Committee on Medical Education:

WHEREAS, The House of Delegates of the American Medical Association has through numerous past resolutions recognized the plight of the general practitioner; and

WHEREAS, It has expressed itself as of the opinion that the preservation of American Medicine is in no small measure dependent on the entry into general practice of greater numbers of doctors; and

WHEREAS, The maintenance of adequate standards for such men in general practice is dependent on a comprehensive program of continuation education; therefore be it

Resolved, That the House of Delegates of the American Medical Association commends the American Academy of General Practice for the initiative it has shown in preparing the "Manual On the Establishment and Operation of a Department of General Practice in Hospitals," which should result in the fair inclusion of general practitioners on the medical staffs of all approved general hospitals, and for the effort that they have made and the result in no small measure achieved through them in making available to general practitioners, as well as to specialists, up-to-date postgraduate courses of practical value; and be it further

Resolved, That copies of this resolution be sent to the President and to the Executive Secretary of the American Academy of General Practice.

Resolution on Exploitation of Services of Physicians for the Financial Profit of the Agency Concerned

Dr. K. S. J. Hohlen, Nebraska, presented the following resolution, which was referred to the Reference Committee on Legislation and Public Relations:

(The following resolution was adopted by the House of Delegates of the Nebraska State Medical Association in Annual Session May 4, 1950)

WHEREAS, Section 6 of Article VI, Chapter III of the recently adopted revised Principles of Medical Ethics of the American Medical Association reads:

Sec. 6. "Purveyal of Medical Service—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people"; and

WHEREAS, A committee of the House of Delegates of the American Medical Association submitted a report to the House in annual session at Atlantic City in June 1949 regarding the practice of medicine by hospitals; and

WHEREAS, One paragraph of this report reads as follows: "Therefore, hospitals and medical schools cannot charge patients fees for medical services rendered by physicians even though the physicians are full time employees of an individual or institution"; and

WHEREAS, This report was adopted by the House of Delegates of the American Medical Association and the Board of Trustees of the American Medical Association was instructed to enforce the principles and obligations involved; and

WHEREAS, The House of Delegates of the Nebraska State Medical Association commended the action of the House of Delegates of the American Medical Association regarding the reaffirmation of these principles and instructed the Nebraska delegates to request the House of Delegates of the American Medical Association to expedite action and implement methods that will enforce Section 6 of Article VI, Chapter III of the Principles of Medical Ethics without delay; therefore be it

Resolved, That the Board of Trustees of the American Medical Association be instructed to implement actively without delay the intent and purpose of Section 6, Article VI, Chapter III of the Principles of Medical Ethics.

Resolution on Evaluation of Health Insurance Policies

Dr. Bruce Underwood, Kentucky, presented the following resolution, which was referred to the Reference Committee on Insurance and Medical Service:

WHEREAS, The public has no means of determining which health insurance policies are of value and which are not; and

WHEREAS, The American Medical Association is in a position to render a great service in rating health insurance policies in a fair and impartial manner; and

WHEREAS, The Council of the Kentucky State Medical Association urges the adoption of this resolution; now, therefore be it

Resolved, That the American Medical Association through one of its councils take the necessary steps to determine the value of all health insurance policies which may be submitted to it and to indicate this information in such a manner that the public may have some reasonable idea of the value of the individual policies.

Resolution on Multiplicity of Meetings of Councils of American Medical Association

Dr. George M. Fister, Utah, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, The medical profession of the United States is at present engaged in a tremendous struggle to preserve and protect the American system of free enterprise and to defeat the drive of government bureaucrats to establish socialism in this country; and

WHEREAS, The successful accomplishment of this end calls for the concentrated effort of the officers and membership of state and local medical societies; and

WHEREAS, The holding of a multiplicity of meetings by various Councils of the American Medical Association at diverse times and places throws too much of a burden on those doctors required to attend such meetings, for the reason that the attendance of many of the same men is generally required; and

WHEREAS, Many of the society officers and representatives are necessarily required to travel great distances away from their practices with resulting inconvenience to their patients and at a great personal and financial sacrifice; and

WHEREAS, The expense incurred in such excessive travel to attend duplicitous meetings throws a heavy financial burden on both state and county medical societies; now therefore be it

Resolved, That the House of Delegates of the American Medical Association go on record as urging the Board of Trustees of the American Medical Association to take such steps as may be necessary to schedule and coordinate properly all meetings, and thereby to eliminate duplicitous and unnecessary travel and expense with coincident waste of time for society members and officers and yet assure an intelligent and comprehensive program designed to accomplish most effectively the objectives of the medical profession.

Resolution on Specialty Boards

Dr. Clarence G. Bandler, New York, presented the following resolution which was referred to the Reference Committee on Medical Education:

WHEREAS, Some hospitals are still showing preferential consideration towards specialty board diplomates in the matter of staff appointments and promotions; and

WHEREAS, Such a policy is discriminatory against a goodly number of reputable practitioners, qualified by reason of long and satisfactory service in accredited hospitals, and therefore against the public interest; and

WHEREAS, For good and sufficient reason of age, economics, time element and lack of available residencies, a sizable number of our colleagues find it humanly impossible to meet the requirements of some specialty boards, though otherwise admittedly qualified to practice a specialty and in many instances certified as Fellows of the American College of Surgeons and of the American College of Physicians; and

WHEREAS, The Council on Medical Education and Hospitals of the American Medical Association with the concurrence of the Advisory Board for Medical Specialties has stated that: "Hospital staff appointments should depend on the qualifications of physicians to render proper care to hospitalized patients as judged by the professional staff of the hospital and not on certification or special society membership"; therefore be it

Resolved, That it be recommended to the American Medical Association that it disapprove of the practice of certain hospitals making specialty board ratings a requirement for appointment or promotion.

Report of Committee on Blood Banks

Dr. Leonard W. Larson, Chairman presented the following report, which was adopted on motion of Dr. Mather Pfeiffenberger, Illinois, seconded by Dr. Clarence G. Bandler, New York, and carried:

Since the meeting of the House of Delegates in December 1949, your Committee on Blood Banks has completed the first phase of the directive of the House in December 1948, namely, a survey of blood banks in the United States and possessions. The report of the Bureau of Medical Economic Research, which has conducted this survey under the supervision of the committee, has been published as Bulletin No. 75 of the Bureau, copies of which have been distributed to members of the House.

This survey was made with the cooperation and assistance of the following national organizations:

1. American Association of Blood Banks
2. American College of Surgeons
3. American Hospital Association
4. American National Red Cross
5. American Protestant Hospital Association
6. American Society of Clinical Pathologists
7. Catholic Hospital Association
8. College of American Pathologists
9. National Research Council

The committee desires to extend the thanks and appreciation of the American Medical Association to each of these organizations for their valuable help. The committee is indebted to Drs. Frank G. Dickinson and Everett L. Welker and the staff of the Bureau of Medical Economic Research for their untiring efforts in completing the report in time for this meeting of the House.

A larger and more descriptive title of Bulletin No. 75 would be "Survey of Blood Banks and Use of Blood in Hospitals in the United States and Possessions." No information on any one of the 1,648 blood banks is given other than the address, and, for the hospital blood bank, the classification of the hospital housing the bank. The confidential nature of the individual returns was established by action of this House of Delegates in 1949.

This survey is based on responses to questionnaires. Some institutions failed to return the questionnaires. For the purpose of this study the Committee on Blood Banks decided, tentatively, to classify as a blood bank any institution which stores blood; that is, the Committee decided that the term "blood bank" should be applied to an institution which stores blood whether or not it also procures or processes blood. The following table classifies the replies to the questionnaires:

Type of Institution	Number	Number
1. Hospital Blood Banks*	1,571	
a. Performing All Blood Bank Functions	(1,136)	
b. Not Performing Some Blood Bank Functions	(433)	
2. Red Cross Regional Blood Centers	31	
3. Nonhospital Blood Banks*	46	
4. Hospitals Without Blood Banks		
a. Number Replying		2,127
b. Number Not Replying		3,032
5. Total Blood Banks	1,648	
6. Cities with Blood Banks and Centers	951	

* Ten of the hospital and two of the nonhospital blood banks are located in United States Territories and Possessions.

Detailed reports on the operation of the Red Cross blood centers may be obtained from the American National Red Cross, Washington, D. C. Of the more than 6,700 hospitals contacted, 1,571 have been classified as having blood banks; of these, 1,136 perform all blood bank functions. A list of 46 nonhospital blood banks was developed. It was decided not to use the word "commercial" because it did not seem to describe correctly all of these 46 nonhospital blood banks, some of which were organized by county medical societies.

Valid conclusions which can be drawn from this survey are as follows:

1. Hospital blood banks issue 2.1 million units, or 60 per cent, of the 3.5 million units of blood used.

2. Red Cross regional blood centers issue 0.4 million units, or 12 per cent, of the 3.5 million units of blood used.

3. Nonhospital blood banks issue 0.3 million units, or 8 per cent, of the 3.5 million units of blood used.

4. The remaining 0.7 million units, or 20 per cent, of the total amount used involve immediate transfusions—from "walking blood banks"—or come from blood banks not found in this survey.

5. No estimates of the amount of plasma and human serum used throughout the country have been made. Many replies stated that plasma was a pharmaceutical item; the replies regarding human serum were inadequate.

6. The current inventory of whole blood is 76,000 units.*

7. The current refrigeration capacity (2 degrees to 10 degrees C.) is 64,000 cubic feet.*

8. The blood banks and centers have equipment and personnel to bleed 5,500 donors* simultaneously, or 440,000 in 80 one-half hour periods during a (40 hour) week.

* The 76,000 units are composed of 61,300 units in hospital blood banks, 6,100 units in Red Cross regional blood centers and 8,100 units in nonhospital blood banks; of the 64,000 cubic feet of refrigeration, 47,100 cubic feet are in hospital blood banks, 10,900 cubic feet in Red Cross regional blood centers and 5,500 cubic feet in nonhospital blood banks; of the 5,500 donors, 4,700 can be bled simultaneously in hospital blood banks, 400 in Red Cross regional blood centers and 400 in nonhospital blood banks.

9. The usual (modal) charges [if any] per unit are $25 for whole blood and $10 for services.

10. The 1,636 blood banks and centers are located in 951 cities in the United States.

The committee further observes, from an analysis of those details not published in the Bulletin, that the general hospitals occupy the predominant position in the procurement and utilization of blood as a therapeutic agent.

The Bureau prepared, but did not publish, a map showing by lines connecting cities the geographic pattern of distribution of blood from banks and centers. The Committee agreed that this map should not be published because of the incompleteness of returns on distribution. However, this incomplete map will be made available to the Council on National Emergency Medical Service with which the committee has a close working relationship, for obvious reasons.

Although this unpublished map, the published map and a large portion of the data obtained in the survey provide a rough indication of where additional blood banks are needed, further study of potential regional integration of blood banks and centers, either in peacetime or in the event of a local or national emergency, is needed to present a complete picture.

It appears to the committee that relating blood usage to hospital bed capacity, average daily census, or admissions, is an unsound basis for measuring the medical need for blood. A new formula, based on the type of medical conditions and surgical procedures which require the administration of blood, is needed as a more precise measure of the total national blood requirements.

Standards

The definition of a blood bank, tentatively established to facilitate the conduct of this survey, needs to be replaced by a more comprehensive definition. Furthermore, no system for accreditation and certification of blood banks has been promulgated by the American Medical Association. Under the authority of Public Law 410, 78th Congress, the National Institute of Health licenses the commercial establishments processing blood and the blood banks from which they obtain blood and blood derivatives. The committee believes that the American Medical Association should set up minimum requirements for approval by the Association. For the purpose of establishing these requirements the committee would need the advice and counsel of qualified consultants.

Civil Defense

At the invitation of the National Security Resources Board, the Board of Trustees of the American Medical Association appointed a member and an alternate member to the Technical Advisory Committee on Blood of the Division of Health Resources of the Office of Civilian Defense. The appointees are Dr. L. W. Larson, member, and Dr. Herbert P. Ramsey, alternate member. Dr. Larson is chairman and Dr. Ramsey is a member of your Committee on Blood Banks. The first meeting of the technical advisory committee was held in Washington, D. C., on June 1 and 2, during which there were preliminary discussions of the potential demand for blood in the event of civilian disaster in a national emergency and the resources which could be mobilized. It was agreed that the survey of Blood Banks reported here today would be a most important contribution to the planning of the technical advisory committee on blood. Much of the information on individual blood banks, which was not published because of the pledge of secrecy referred to in the committee's report to the House at the Washington Interim Session and set forth in the covering letter by the Secretary and General Manager enclosed with each questionnaire, will undoubtedly be of great value to the Department of Defense and the National Security Resources Board. The committee suggests that the House authorize the Board of Trustees to determine the conditions under which unpublished information contained in the individual questionnaires may be furnished and to what agencies.

Although in the opinion of the committee this requirement of secrecy was advisable in the conduct of the survey just completed, the Committee would deem it unwise to enforce this requirement on future surveys, unless the Board of Trustees should require it.

AMERICAN RED CROSS NATIONAL BLOOD PROGRAM

As of today, the Red Cross has 33 Regional Blood Centers in operation. The three centers not listed in the survey are located in Yakima, Washington; Madison, Wisconsin, and Buffalo, New York. The center at Hartford, Conn., is scheduled to be opened in July 1950.

During the calendar year 1949, this program procured and processed 400,000 units of blood.

Since the last meeting of the House of Delegates the Board of Governors of the American National Red Cross has given the blood program an independent status. It has been transferred out of the Division of Health Services. Policy decisions are now entrusted to a committee of five physicians, of which Dr. Ross T. McIntire is chairman. This committee reports directly through the President of the American National Red Cross, General George C. Marshall, to the Board of Governors. It is the opinion of the Committee on Blood Banks that this internal rearrangement within the Red Cross will greatly facilitate the operation of their blood program and, in particular, will be of material assistance in the adjustment of controversies covering the program which may, from time to time, arise.

RECOMMENDATIONS

On the basis of the survey and numerous conferences with those responsible for the operation of the several different types of blood banks, the committee desires to make the following recommendations:

1. That the House of Delegates authorize the Board of Trustees to have a brochure prepared describing the history of the different types of blood banks. This brochure should be made available to physicians, hospitals and community leaders who are considering the establishment of a blood bank in their community.

2. That the House of Delegates authorize the Board of Trustees to have made an annual or biennial survey similar to the survey just completed.

3. That the House of Delegates authorize its Committee on Blood Banks to prepare suitable standards for certification of blood banks and submit same to the House for approval, and that to accomplish this objective the committee be authorized, with the approval of the Board of Trustees, to appoint technical advisors and to solicit the assistance of such organizations as the College of American Pathologists, the American Society of Clinical Pathologists, the American Association of Blood Banks, the National Institute of Health, the National Research Council, the American National Red Cross and the American Hospital Association.

4. That the House of Delegates record its approval of the following two principles in the operation of blood banks and blood centers:

(*a*) Since the only source of human blood is human beings, the responsibility for replacement of blood by the patient, his family, his friends and the various organizations of which he is a member is asserted by this House of Delegates.

(*b*) The inter-bank exchange of blood on a unit for unit basis is imperative in order to develop an integrated national system of blood banks and centers.

Respectfully submitted,

LEONARD W. LARSON, Chairman.
WILLIAM A. COVENTRY.
JAMES Q. GRAVES.
JOHN W. GREEN.
HERBERT P. RAMSEY.
JAMES R. REULING.
DEERING G. SMITH.
WILLIAM D. STOVALL.
JAMES STEVENSON.

Resolutions on Residency Training in Obstetrics and Gynecology

Dr. H. H. Bauckus, New York, presented the following resolutions, which were referred to the Reference Committee on Medical Education:

WHEREAS, Effective December 31, 1949, physicians desiring admission to the American Board of Obstetrics and Gynecology are required to have seven years of experience exclusive of one year's intern experience, to include three years of residency training in obstetrics and gynecology and two years of practice limited exclusively to that specialty; and

WHEREAS, These requirements are adequate for the basic and advance training necessary for practicing the specialty of obstetrics and gynecology; and

WHEREAS, These requirements create a situation which practically precludes the possibility of specialty training of any physician regardless of ability unless such training is taken immediately on graduation; and

WHEREAS, Many hospitals are experiencing difficulties in securing residents to accept the three years' course of training; and

WHEREAS, Physicians completing residency programs find it increasingly difficult to practice their specialty in recognized hospitals, in order to obtain additional experience necessary to apply for boards, because of the restrictive action of increasing numbers of hospitals that are demanding board recognition before granting major operative privileges to such qualified graduate residents; therefore be it

Resolved, That the House of Delegates of the American Medical Association go on record as being opposed to any further extension of residency training in obstetrics and gynecology; and be it further

Resolved, That this House of Delegates urges reevaluation of the entire program of residency training.

Resolution on Pilot Survey of Practitioners of So-Called Healing Arts

Dr. D. M. Vickers, New York, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, No accurate statistics are available as to the number and type of practitioners of the so-called healing arts other than medicine practicing in the United States; and

WHEREAS, A definite knowledge of what has been accomplished regarding cults in the various states would be of value to many groups in the American Medical Association; therefore be it

Resolved, That the American Medical Association request its Board of Trustees to make a pilot survey of the number and types of practitioners of so-called healing arts or systems of healing other than the practice of medicine in the United States and, following such pilot survey, if it seems desirable, proceed to make a complete survey of the whole country on this subject.

Resolution on Change in Name of Section on Preventive and Industrial Medicine and Public Health

Dr. Stanley H. Osborn, Section on Preventive and Industrial Medicine and Public Health, presented the following resolution, which was referred to the Reference Committee on Sections and Section Work, with the approval of the Council on Scientific Assembly to be requested:

WHEREAS, It is the desire of the Section on Preventive and Industrial Medicine and Public Health that the words "and Industrial" be omitted from the title of the section; therefore be it

Resolved, That the title of the section be changed to Section on Preventive Medicine and Public Health.

Resolution on Establishment of New Section on Medicine in Industry

Dr. Stanley H. Osborn, Section on Preventive and Industrial Medicine and Public Health, presented the following resolution, which was referred to the Reference Committee on Sections and Section Work, with the approval of the Council on Scientific Assembly to be requested:

WHEREAS, The members of the Section on Preventive and Industrial Medicine and Public Health desire with other members of the American Medical Association to have a section established for all members interested in medicine in industry; therefore be it

Resolved, That a new scientific section be established under the name of Section on Medicine in Industry.

Resolution on Voting by Ballot

Dr. Stanley H. Osborn, Section on Preventive and Industrial Medicine and Public Health, presented the following resolution, which was referred to the Reference Committee on Rules and Order of Business:

WHEREAS, It has been long the custom of the House of Delegates to vote by ballot on certain matters that come before it, and to have the vote announced vote by vote orally to the House, and tallied on a blackboard; and

WHEREAS, This method of announcing a vote, while it is democratic and most interesting to the members of the House, does take up much time that could be devoted to the tremendous amount of business before it; and

WHEREAS, There is now so much business to be done by the members of the House that it seems desirable to conserve all the time that is possible in order to handle the business before the members and to do so efficiently; therefore be it

Resolved, That the announcement of the results of balloting by the members of the House be reported by the tellers appointed by the Speaker of the House to him immediately after the votes have been tallied and then reported by the Speaker to the members of the House immediately.

Resolution on Collection of American Medical Association Dues

Dr. J. Stanley Kenney, New York, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, When annual dues were levied by the American Medical Association it was decided by that body that responsibility for the collection of these dues should devolve on the state and county societies; and

WHEREAS, It has been our experience that this method of procedure has resulted in confusion as to which organization the member was indebted; and

WHEREAS, There is also confusion with regard to the differentiation between the new American Medical Association dues and American Medical Association Fellowship dues; and

WHEREAS, Such confusion might tend to interfere with the prompt and orderly collection of county, state and national dues; now therefore be it

Resolved, That the House of Delegates of the American Medical Association is hereby memorialized to instruct the administrative division of the American Medical Association to establish its own independent procedures for collecting the dues of this organization directly from the individual members.

Resolutions on Medical Relations in Workmen's Compensation

Dr. J. Stanley Kenney, New York, presented the following resolutions, which were referred to the Reference Committee on Industrial Health:

WHEREAS, Medical relations in Workmen's Compensation administration are of fundamental importance to industrial health; and

WHEREAS, The desirable objective of medical service to workers disabled by industrial accident or occupational disease is restoration to former earning capacity with minimum loss of time; and

WHEREAS, a recent conference called by President Truman has emphasized the need for improved coordination between the administrators of Workmen's Compensation and/or Rehabilitation; and

WHEREAS, Workmen's Compensation has taken on added significance by reason of recent legislation in New York State which assigns administration of unemployment compensation for non-occupational disability to the Workmen's Compensation Board; and

WHEREAS, The Council on Industrial Health has established a Committee on Workmen's Compensation and consultants eminent in the associated administrative, legal and technical fields, including proper liaison with the Bureau of Legal Medicine and Legislation and of Medical Economic Research; therefore be it

Resolved, That this Council through its Committee and Consultants investigate the present status of medical relations under the Workmen's Compensation laws of the states, territories and federal government and report its findings back to this House in June 1951 and regularly thereafter; and be it further

Resolved, That the Council on Industrial Health in furtherance of this objective enlist the support of the state medical associations, the Medical Committee of the International Association of Industrial Accident Boards and Commissions, the American Association of Industrial Physicians and Surgeons and the American Academy of Compensation Medicine.

Resolutions on Recognition of Practice of Anesthesiology, Pathology, Physical Medicine and Roentgenology as Practice of Medicine

Dr. P. J. DiNatale, New York, presented the following resolutions, which were referred to the Reference Committee on Reports of Board of Trustees and Secretary:

WHEREAS, A set of resolutions recently adopted by the Board of Trustees of the American Hospital Association seeks to include anesthesiologic, radiologic, pathologic and physiatric services as hospital services and recommends that these be so defined in prepayment hospital insurance plan subscriber certificates; and

WHEREAS, Such a practice, necessitating hiring by hospital management of physicians to provide such medical services would actually result in division of fees for professional services; and

WHEREAS, The former, that is, the hiring of physicians by corporate lay bodies, might rightfully be construed as unethical; and

WHEREAS, The latter, i. e., division of fees between physicians and laymen, or between physician and other physicians, is unethical; therefore be it

Resolved, That the American Medical Association recognizes the practice of anesthesiology, pathology, physical medicine and roentgenology as the practice of medicine; and be it further

Resolved, That recognition by the American Medical Association be denied such hospitals as may be party to violation of medical ethics by physicians.

Resolution on Graduate Training

Dr. Samuel J. McClendon, California, presented the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, We have been unofficially informed that the American Medical Association, the American College of Surgeons and the American Board of Surgery have finally agreed on a unified service of hospital inspection and approval for graduate training in general surgery; and

WHEREAS, This step has been long overdue and it is to be hoped that further steps will follow more promptly for correction of the present intolerable system of bureaucratic dictation of graduate training; now therefore be it

Resolved, 1. That the Advisory Board for Medical Specialties be instructed to authorize no more new specialty boards without specific approval by this House of Delegates.

2. That the Council on Medical Education and Hospitals be instructed to offer, with adequate publicity in The Journal, to extend its unified inspection service to include the other specialties concerned in hospital graduate training programs.

3. That the American Medical Association, through its Council on Medical Education and Hospitals, take proper steps to insure (*a*) some reasonable and less rigid training programs for graduate education, (*b*) that rigid limitations of practice be abandoned and (*c*) that properly unified authority through American Medical Association channels be established for general supervision of all specialty boards.

Resolutions on Practice of Medicine by Hospitals

Dr. J. D. Hamer, Arizona, presented the following resolutions, which were referred to the Reference Committee on Reports of Board of Trustees and Secretary:

WHEREAS, Chapter III, Article VI, Section 6 of the recently adopted revised Principles of Medical Ethics of the American Medical Association reads:

Section 6. "Purveyal of Medical Service—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people"; and

WHEREAS, The committee known as the "Hess" Committee reported to the American Medical Association House of Delegates in Atlantic City in June 1949, in detail, regarding the practice of medicine by hospitals; and

WHEREAS, The "Hess" report in one paragraph stated in explanation as follows: "Therefore, hospitals and medical schools cannot charge patients fees for medical services rendered by physicians even though the physicians are full-time employees of an individual or institution"; and

WHEREAS, The "Hess" report was adopted by the American Medical Association House of Delegates and the Trustees of the American Medical Association were instructed to enforce the principles and obligations involved; and

WHEREAS, The House of Delegates of the American Medical Association in Washington in December 1949 reaffirmed its belief in and confirmed the principles stated in the "Hess" report and directed that all action by the Trustees be deferred only until all legal requirements were met in order to insure that all action taken shall comply with the law; and

WHEREAS, The Trustees of the American Medical Association are to report to the House of Delegates in June 1950 regarding this matter and the "Hess" Committee is to report its further study; therefore be it

Resolved, That the House of Delegates of the Arizona State Medical Association confirm the action of the American Medical Association House of Delegates regarding the reaffirmation of the principles of the so-called "Hess" report; and be it further

Resolved, That the House of Delegates of the Arizona State Medical Association request the American Medical Association House of Delegates to expedite action and implement methods that enforce Section 6, Article VI, Chapter III of the Principles of Medical Ethics without delay; and be it further

Resolved, That our delegate to the American Medical Association is hereby instructed regarding these desires and directed to work for their fulfilment.

Resolution on Single Membership Classification

Dr. Julian P. Price, South Carolina, presented the following resolution, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

At the sixth annual meeting of the Conference of Presidents and Other Officers of State Medical Associations, held on June 25, 1950, the following resolution was adopted with recommendation that it be submitted to the House of Delegates of the American Medical Association:

WHEREAS, Active membership in state medical associations entitles members to all rights and privileges; and

WHEREAS, The American Medical Association now maintains a separate classification of membership and Fellowship that is not con-

sistent with the procedures generally adopted by state and county medical associations and societies; therefore be it

Resolved, That the Conference of Presidents and Other Officers of State Medical Associations requests that the American Medical Association adopt a single membership classification for all physicians to be listed as active members in good standing and that such single membership entitle the holder thereof to all rights and privileges now accorded both members and Fellows of the American Medical Association.

Resolution on Continuation and Expansion of National Education Program

Dr. Julian P. Price, South Carolina, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

At the sixth annual meeting of the Conference of Presidents and Other Officers of State Medical Associations, held on June 25, 1950, the following resolution was adopted with recommendations that it be submitted to the House of Delegates of the American Medical Association:

WHEREAS, The National Education Campaign of the American Medical Association has demonstrated both the need and the great value of general public education on the point of view of the medical profession of the United States and its territories relative to compulsory health insurance; and

WHEREAS, This National Education Campaign has also stimulated public interest in the voluntary and American way of extending medical care; therefore be it

Resolved, that the Conference of Presidents and Other Officers of State Medical Associations firmly endorses and supports the continuance and the expansion of this national education program.

Proposed Amendment to By-Laws

Dr. B. E. Pickett Sr., Texas, presented the following proposed amendment to Division Two, Chapter 4, Section 2, Paragraph B, of the By-Laws, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

WHEREAS, An inconsistency exists which could cause confusion or embarrassment from the present wording of the By-Laws as found on page 13, Division Two, "Scientific Assembly," Chapter IV, Section 2, paragraph B, third sentence "Associate Fellows shall be privileged to participate in the Scientific Assembly;" therefore be it

Resolved, That this sentence be stricken from the Constitution and By-Laws and in lieu thereof be substituted the following: "Associate Fellows shall be privileged to participate in the Scientific Assembly without the right to vote or hold office."

Proposed Amendment to By-Laws

Dr. B. E. Pickett Sr., Texas, presented the following amendment to the By-Laws Division Two, Chapter V, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

WHEREAS, At the recent Interim Session of this House of Delegates in Washington, D. C., a resolution was passed levying dues of $25.00 on all members of component societies; and

WHEREAS, Dues paying members were classified as active members; and

WHEREAS, Members who failed to pay American Medical Association dues were counted delinquent members; and

WHEREAS, Dues paying members were given the rights of registration at the Annual and Interim Sessions with all that this privilege bestows under the Constitution and By-Laws; therefore be it

Resolved, That Chapter V, page 15, of the Constitution and By-Laws of the American Medical Association under "Registration" be changed to read as follows:

Only the following shall be permitted to register at any session:
1. Member or Service Fellows;
2. Active members.
3. Associate, Affiliate or Honorary Fellows;
4. Invited Guests;
5. Medical students of approved medical schools who are certified to the Secretary of the Association by their respective deans, and
6. Interns and residents who are graduates of approved medical schools and who are certified to the Secretary of the Association by the superintendents of their respective hospitals.

Resolution on Hospital Staff Meetings

Dr. Edward H. McLean, Oregon, presented the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, The strength of medical organization is based on the strength of its component county units; and

WHEREAS, The component county medical societies have been weakened in recent years, in considerable part, as a result of the frequency of hospital staff meetings and the elaboration of hospital staff meeting programs to include formal papers which should properly be presented at county medical society meetings; therefore be it

Resolved, That it be recommended that the requirements with respect to hospital staff meetings be changed to provide that meetings be held quarterly instead of monthly and that the programs be limited to discussions of questions of concern to the hospital staffs.

Resolutions on Inspection and Evaluation of Hospitals

Dr. Warren L. Allee, Missouri, presented, for Dr. Howard B. Goodrich, Missouri, and himself on behalf of the Missouri State Medical Association, the following resolutions, which were referred to the Reference Committee on Medical Education:

WHEREAS, The Council on Medical Education and Hospitals of the American Medical Association has rendered outstanding service in the guidance and supervision of postgraduate medical education; and

WHEREAS, The Council on Medical Education and Hospitals is now considering its participation in a proposed unification of its hospital inspection and specialized training evaluation service with similar services rendered at present by various specialty boards and other rating organizations; and

WHEREAS, The proposed unification is an important and far reaching development in the field of hospital inspection and in the determination of qualifications to pursue acceptable postgraduate medical training programs; and

WHEREAS, The proposed unified inspection and evaluation service will be confronted by many problems and difficulties whose prompt and proper solution is of utmost importance to the public, the hospitals and the medical profession; therefore be it

Resolved, That this House of Delegates of the American Medical Association extend a commendation to the Council on Medical Education and Hospitals for its outstanding efforts and accomplishments in behalf of postgraduate medical education; and be it further

Resolved, That in order to safeguard the interests of the public, the hospitals and the medical profession in connection with the future inspection and evaluation of postgraduate training activities of hospitals by the proposed unified inspection and evaluation service, a special advisory committee to the latter be appointed by the proper authorities of the American Medical Association to assist in the development and enforcement of such policies and procedures which will guarantee to the hospitals and staffs concerned the greatest possible efficiency and equitable consideration in the future evaluation of their facilities and activities in the training of interns and residents in the various specialties; and be it further

Resolved, That in the policies and regulations governing the inspection and evaluation of hospitals requesting approval of their training programs for interns and residents specific provisions be made to assure that (*a*) the hospitals which are not affiliated with universities be given adequate and equitable representation on the proposed advisory committee and on the board or committee which will direct and regulate the activities of the proposed unified or the present inspection and evaluation service; and that (*b*) after a hospital has been surveyed, the report covering the inspector's findings and recommendations be forwarded promptly to designated officials of the hospital concerned for their information, guidance and action; and that (*c*) in case the hospital concerned disagrees with the findings of the inspector it shall be invited and given opportunity to submit its rebuttal within a specified period and before the Council undertakes official action on the findings and recommendations of the inspector; and that (*d*) after the Council has taken official action the hospital concerned shall be given the right and the opportunity for appealing the action of the Council before an appeal board specifically created for this purpose; and that (*e*) all letters from the Council and the proposed unified inspection and evaluation service which pertain to and may affect the standing and reputation of individual hospitals shall be transmitted to the hospital concerned in duplicate addressed to the Superintendent and/or the medical director and the chief of staff, and that, (*f*) the final action of the Council and/or the appeal board shall not be published until the hospital concerned has been officially notified by letter of the final action taken.

Resolution on Single Membership Classification

Dr. Carl A. Lincke, Ohio, presented the following resolution, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

WHEREAS, There is constantly growing confusion, misunderstanding and criticism among the members of the American Medical Association regarding "Fellowship"; and

WHEREAS, A classification of members known as "Fellows" is, in the opinion of many members, unnecessary; and

WHEREAS, The relationship between the American Medical Association and its members would be improved by establishing a single membership classification in order that all members would receive uniform benefits in return for their annual membership dues; therefore be it

Resolved, That the House of Delegates of the Ohio State Medical Association in session May 16, 17 and 18, 1950, favors a single membership classification in the American Medical Association; requests the Board of Trustees of the American Medical Association to prepare appropriate amendments to the Constitution and By-Laws and to submit the same to the House of Delegates for action, and recommends that serious consideration be given to formulating a feasible plan whereby each member would receive The Journal of the American Medical Association as a part of his all-inclusive membership benefits.

Resolutions on Report of Committee Hospitals and the Practice of Medicine

Dr. George A. Woodhouse, Ohio, presented the following resolutions, which were referred to the Reference Committee on Reports of Board of Trustees and Secretary:

WHEREAS, Chapter III, Article VI, Section 6, of the recently adopted revised Principles of Ethics of the American Medical Association reads:

Section 6. "Purveyal of Medical Service—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people"; and

WHEREAS, The committee known as the "Hess" committee reported to the American Medical Association House of Delegates in Atlantic City in June 1949, in detail, regarding the practice of medicine by Hospitals; and

WHEREAS, The "Hess" report in one paragraph stated in explanation as follows: "Therefore, hospitals and medical schools cannot charge patients fees for medical services rendered by physicians even though the physicians are full time employees of an individual or institution; and

WHEREAS, The "Hess" report was adopted by the American Medical Association House of Delegates and the Trustees of the American Medical Association were instructed to enforce the principles and obligations involved; and

WHEREAS, The House of Delegates of the American Medical Association in Washington in December, 1949, reaffirmed its belief in and confirmed the principles stated in the "Hess" report and directed that action by the Trustees be deferred only until all legal requirements were met in order to insure that all actions taken shall comply with the law; therefore be it

Resolved, That the house of delegates of the Ohio State Medical Association confirms the action of the American Medical Association House of Delegates regarding the reaffirmation of the principles of the so-called "Hess" report; and be it further

Resolved, That the house of delegates of the Ohio State Medical Association requests the American Medical Association House of Delegates to expedite action and implement methods that will enforce Section 6, Article VI, Chapter III, of the Principles of Medical Ethics without delay.

Resolution on Endorsement of World Medical Association

Dr. Ralph A. Johnson, Michigan, presented the following resolutions, which were referred to the Reference Committee on Miscellaneous Business:

WHEREAS, World conditions are in a state of tension and strife between nations and peoples; and

WHEREAS, The medical profession knows the human suffering incident to both hot and cold wars better than any other group; and

WHEREAS, Our lives are dedicated to the prevention of and to the relief from human suffering; therefore be it

Resolved, That we endorse necessary defense measures for protection against destructive forces arising out of international enmities and political strife; and be it further

Resolved, That inasmuch as one of the major objectives of the World Medical Association is world peace, the American Medical Association, as a member of the World Medical Association, appeal to fellow medical men of all nations to unite in efforts toward world peace without resorting to destructive measures.

Resolution on Dissemination of Information Designed to Prevent Blindness

Dr. William L. Benedict, Section on Ophthalmology, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, It is not contrary to the Principles of Medical Ethics as determined by the American Medical Association for members of the Association to disseminate information pertaining to matters of public health, such as cancer, diabetes and venereal disease, by lectures, demonstrations, radio talks, pamphlets and conferences or other means to non-medical groups; and

WHEREAS, Ophthalmic subjects, such as vascular disease, glaucoma, retinal disorders and optic nerve disease, considered as potential causes of blindness are matters of grave importance to the public; and

WHEREAS, The prevention of blindness is one of the chief obligations of ophthalmologists; therefore be it

Resolved, That the Section on Ophthalmology of the American Medical Association declares that it is entirely within the definition of medical ethics for its members to engage in lectures, demonstrations, the preparation of pamphlets and other measures suitable for the dissemination of information designed to prevent blindness and directed to any nonmedical group.

Resolutions on Hospital Practice of Medicine

Dr. Louis M. Orr II, Florida, presented the following resolutions, which were referred to the Reference Committee on Reports of Board of Trustees and Secretary:

WHEREAS, Chapter III, Article VI, Section 6, of the recently adopted revised Principles of Medical Ethics of the American Medical Association reads:

Section 6. "Purveyal of Medical Service—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people"; and

WHEREAS, The committee known as the "Hess" committee reported to the American Medical Association House of Delegates in Atlantic City in June, 1949, in detail regarding the practice of medicine by hospitals; and

WHEREAS, The "Hess" report in one paragraph stated in explanation as follows: "Therefore, hospitals and medical schools cannot charge patients fees for medical services rendered by physicians even though the physicians are full time employees of an individual or institution"; and

WHEREAS, The "Hess" report was adopted by the American Medical Association and the Trustees of the American Medical Association were instructed to enforce the principles and obligations involved; and

WHEREAS, The House of Delegates of the American Medical Association in Washington in December 1949 reaffirmed its belief in and confirmed the principles stated in the "Hess" report and directed that action by the Trustees be deferred only until all legal requirements were met in order to insure that all action taken shall comply with the law; and

WHEREAS, The Trustees of the American Medical Association are to report to the House of Delegates in June 1950 regarding this matter and the "Hess" Committee is to report its further study; therefore be it

Resolved, That the house of delegates of the Florida Medical Association confirms the action of the American Medical Association House of Delegates regarding the reaffirmation of the principles of the so-called "Hess" report; and be it further

Resolved, That the house of delegates of the Florida Medical Association requests the American Medical Association House of Delegates to expedite action and implement methods that will enforce Section 6, Article VI, Chapter III of the Principles of Medical Ethics without delay; and be it further

Resolved, That our delegates to the American Medical Association are hereby instructed regarding these desires and requested to work for their fulfilment.

Resolutions on Enforcement of Principles of Medical Ethics

Dr. F. S. Crockett, Indiana, presented the following resolutions, which were referred to the Reference Committeee on Reports of Board of Trustees and Secretary:

WHEREAS, The "Hess" committee made a report to the House of Delegates of the American Medical Association in June 1949 in Atlantic City regarding the practice of medicine by hospitals or other corporations; and

WHEREAS, The "Hess" report states, "therefore, hospitals and medical schools cannot charge patients fees for medical services rendered by physicians even though the physicians are full time employees of an individual or institution"; and

WHEREAS, The "Hess" report was adopted by the American Medical Association House of Delegates and instructions were given to the Trustees of the American Medical Association to enforce the matters and principles contained in the report; and

WHEREAS, The House of Delegates of the American Medical Association in December 1949 convened in Washington, D. C., again confirmed the principles contained in the "Hess" report and directed that action by the Trustees deriving from this report be delayed only until legal requirements were investigated and met so that all actions taken would comply with the law; and

WHEREAS, The "Hess" committee is to report its further study to the House of Delegates in San Francisco in June 1950 and likewise the Trustees of the American Medical Association are to report at this convention; and

WHEREAS, It is apparent to the physicians of Indiana that since the position of medical practitioners in the field of anesthesiology, pathology and roentgenology has been subjugated by many hospitals and other corporations, the attitude and ambitions of such officials will logically lead to the same subjugation of other physicians practicing in other special fields of medicine; and

WHEREAS, This subjugation of the aforementioned specialists serves to discourage high quality individuals from entering these specialties in adequate numbers; and

WHEREAS, These aforementioned basic medical services, if rendered on a high plane, constitute the keystone of good medical service in a community; and

WHEREAS, In America there is developing, even among some physicians in local authority, the philosophy that groups of physicians may ethically band together to employ and subjugate fellow physicians, which is beneath the dignity of professional practice; therefore be it

Resolved, That the executive committee of the Indiana State Medical Association affirms the principles enunciated in the "Hess" report; and be it further

Resolved, That the executive committee of the Indiana State Medical Association requests the House of Delegates of the American Medical Association to delay no longer in accomplishing the enforcement of Section 6, Article VI, Chapter III of the Principles of Medical Ethics; and be it further

Resolved, That the House of Delegates of the American Medical Association take cognizance of the fact that while the physicians of America are opposing their subjugation by the present Federal government we are witnessing the subjugation of certain segments of our own profession, instituted or condoned by certain other members of our profession.

Resolution on Specialty Boards

Dr. A. C. Scott, Texas, presented the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, The medical profession recognizes that in recent years the distribution of physicians throughout the nation has been overbalanced in favor of the large urban areas at the expense of small communities and rural areas; and

WHEREAS, The medical profession is deeply concerned with providing an adequate distribution of physicians for all areas of the nation, both urban and rural; and

WHEREAS, One of the contributing causes for this unequal distribution favoring urban over rural areas has been brought about by the desire on the part of many young physicians immediately on graduation to specialize before obtaining broad experience in the field of general practice; and

WHEREAS, It is the belief of the house of delegates of the State Medical Association of Texas that these young physicians would be better trained and greatly benefited by a required foundation of general practice on which to build later specialization; and

WHEREAS, It is within the rights and duties of the various specialty boards to prescribe and require certain prerequisites for admission to board examinations; and

WHEREAS, A period of general practice imposes no more hardship on a candidate for board membership than some other requirements; now therefore be it

Resolved, That this house of delegates go on record as petitioning that the House of Delegates of the American Medical Association request that all of the specialty boards establish as one of their prerequisites to certification the requirement that an applicant must have spent at least two years in general practice or, as a substitute therefor, a period of one year in general practice in a community of 5,000 population or less, and that applicants be given credit toward certification of one year in general practice.

Resolutions on Opposition to Certain Bills Before Congress

Dr. Charles H. Phifer, Illinois, presented the following resolutions, which were referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, The State of Illinois, in the sum total of federal taxes paid, is second only to the State of New York, and

WHEREAS, The theory of Federal grants-in-aid is, therefore, not acceptable; it should rather be recognized that it is through state grants-in-aid that the federal government exists; and

WHEREAS, The Federal grants-in-aid is inevitably accompanied by its natural corollary, federal control, acknowledged by a decision of the Supreme Court and such control is a basic provision of the pending so-called "fringe" bills; and

WHEREAS, The designation "fringe" is in itself a misnomer, as these bills are integral parts of the National Health Plan, as expressed in the Wagner-Murray-Dingell bills, or closely allied thereto; and

WHEREAS, The "fringe" bills were all passed unanimously by the Senate and their House versions are now under consideration by a House committee, and thus likely to reach the floor of the House at any moment; and

WHEREAS, These bills, if enacted into law, in addition to the basic federal control prescribed, would (1) (H. R. 5865: Local Public Health Units) destroy the present legal arrangement whereby the State of Illinois has complete authority over the administration of all Federal funds received for public health purposes, vesting this authority in the Surgeon General, include in the program of "basic public health services" by definition, detection and diagnosis of chronic diseases and such other services concerned with the maintenance, protection or improvement of the public health as the Surgeon General, with the approval of the annual conference of state health authorities, may prescribe, and elevate the Surgeon General to the position of supreme dictator through a set of regulations to be promulgated, prescribed and administered by him with agreement of state health authorities only "insofar as (is) practicable," and which would have the force of law, although not actually written into the law; (2) (S. 1411: School Health Services) would permit among other provisions for free periodic medical and dental examinations for all school children and free medical and dental services for the children of medically indigent parents, at the option of the state, free "prevention and treatment of physical and mental defects and conditions for all school children," estimated at 30,000,000, regardless of the economic status of the parents, and (3) (H. R. 5940: Medical Education) would seriously threaten the academic freedom of the medical and other institutions to be endowed, as well as the education of medical and other health personnel of the states which would receive grants for scholarships and, based as it is on a fallacious calculation of a shortage of medical and other health personnel and on the anticipated requirements of a system of compulsory sickness insurance, could only result in the hastening of the nationalization of medicine; now therefore be it

Resolved, That the Illinois State Medical Society express its unalterable opposition to the enactment of the federal legislation embodied in the three bills enumerated, which may be imminent, as well as to the versions passed by the Senate, S. 522, S. 1411 and S. 1453 respectively; and be it further

Resolved, That the Illinois State Medical Society be requested to use its best efforts and influence to defeat all of these measures and that it make this same recommendation to the American Medical Association; and be it further

Resolved, That the American Medical Association be urged to influence the Public Health Service to desist from the practice of applying sanctions in the form of a denial of public health services or in any other manner against the counties that refuse to vote on local health units in order to participate in the federal-state plan as embodied in the first mentioned bill, H. R. 5865, and other legislation covering the same subject; and be it further

Resolved, That the delegates of this society be instructed to present these resolutions to the House of Delegates at the Annual Session of the American Medical Association in San Francisco on June 26, 1950.

Resolutions on Purveyal of Medical Service

Dr. Charles H. Phifer, Illinois, presented the following resolutions, which were referred to the Reference Committee on Reports of Board of Trustees and Secretary:

WHEREAS, Chapter III, Article VI, Section 6, of the recently adopted revised Principles of Medical Ethics of the American Medical Association reads:

Section 6. "Purveyal of Medical Service."—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people; and

WHEREAS, The committee known as the "Hess" Committee reported to the American Medical Association House of Delegates in Atlantic City in June 1949, in detail, regarding the practice of medicine by hospitals; and

WHEREAS, The "Hess" report in one paragraph stated in explanation as follows: "Therefore hospitals and medical schools cannot charge patients fees for medical services rendered by physicians even though the physicians are full time employees of an individual institution"; and

WHEREAS, The "Hess" report was adopted by the American Medical Association House of Delegates and the Trustees of the American Medical Association were instructed to enforce the principles and obligations involved; and

WHEREAS, The House of Delegates of the American Medical Association in Washington in December 1949, reaffirmed its belief in and confirmed the principles stated in the "Hess" report and directed that action by the Trustees be deferred only until all legal requirements were met in order to insure that all action taken shall comply with the law; and

WHEREAS, The Trustees of the American Medical Association are to report to the House of Delegates in June 1950 regarding this matter and the "Hess" Committee is to report its further study; therefore be it

Resolved, That the House of Delegates of the Illinois State Medical Society confirms the action of the American Medical Association House of Delegates regarding the reaffirmation of the principles of the so-called "Hess" report; and be it further

Resolved, That the house of delegates of the Illinois State Medical Society requests the American Medical Association House of Delegates to expedite action and implement methods that will enforce Section 6, Article VI, Chapter III of the Principles of Medical Ethics without delay; and be it further

Resolved, That our delegates to the American Medical Association are hereby instructed regarding these desires and requested to work for their fulfilment.

Resolution on Newly Elected Delegates

Dr. Charles H. Phifer, Illinois, presented the following resolution, which was referred to the Reference Committee on Rules and Order of Business:

WHEREAS, The Constitution and By-Laws of the American Medical Association now provides that newly elected delegates may not assume office until January 1 following their election; and

WHEREAS, This can and sometimes does cause an elected delegate to be delayed for two meetings of the American Medical Association before assuming the duties of his office; therefore be it

Resolved, That Chapter IX, Section 1, Paragraph B of the By-Laws of the American Medical Association be changed to provide for the induction into office of newly elected delegates sixty days after election.

Resolution on Request for Section on Military Medicine and Surgery

Dr. James C. Sargent, Wisconsin, presented the following resolution, which was referred to the Reference Committee on Sections and Section Work, which must refer such matters to the Council on Scientific Assembly for approval:

WHEREAS, The exigencies of the times impose on the members of the medical profession the responsibility of constant familiarity with those aspects of medical practice likely to be encountered during service with either the civil defense or armed forces of the nation; and

WHEREAS, The present scientific session has afforded opportunity to determine the interest in and the success of such topical presentations as a part of the scientific program; therefore be it

Resolved, That the Council on Scientific Assembly be requested to consider again the establishment of a Section on Military Medicine and Surgery.

Resolution on Council on Federal Medical Services

Dr. James C. Sargent, Wisconsin, presented the following resolution, which was referred to the Reference Committee on Emergency Medical Service:

WHEREAS, An increasing number of persons who under no circumstances can be classed as indigents are now receiving free medical and hospital care in the hospitals of federal agencies (Veterans Administration, Armed Forces, United States Public Health Service, Panama Canal Company, etc.) whose right to such free medical and hospital care is either questionable or based on tradition, custom, courtesy or the privileged group interpretation of permissive legislation; and

WHEREAS, These federal agencies, acting independently, unilaterally and with apparent disregard for national economy or the long established civilian health services of the country, are continuously expanding, without proper top level coordination or control and in a manner and to a degree neither contemplated by Act of Congress nor desired by the American people; and

WHEREAS, It is a clear responsibility of the medical profession of the country to keep itself and the public completely informed and alert to the dangers inherent in such an uncontrolled program of expanding free federal medical care and to consult with and advise the President, the Congress and the American people on the most equitable and effective method of supplying a high type of medical care to personnel clearly entitled by statutory acts to receive such service; therefore be it

Resolved, That the Board of Trustees be and is hereby empowered and directed to appoint and to provide with adequate funds and staff a standing committee of not less than five nor more than eleven Fellows of the American Medical Association to be known as the Council of Federal Medical Services and having the specific functions of (a) advising the Board of Trustees on all aspects of the several forms of federally supplied medical care either now or to be established; of (b) serving the Board of Trustees and the Association in conference with and in representations to both nongovernmental and governmental agencies interested in the several forms of federally supplied medical care, and of (c) advising the House of Delegates at each of its regular and special sessions on any policy or change in policy of the Association relating to the several forms of ferally supplied medical care which may require its consideration and action.

Resolution on Income Tax Exemption

Dr. J. Wallace Hurff, New Jersey, presented the following resolution, which was referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, The United States government has long recognized the principle of tax exemption for activities which produce social benefit; and

WHEREAS, Income tax laws generally permit taxpayers to recover tax free the costs of capital investments; and

WHEREAS, A physician attending a recognized postgraduate course is making a voluntary investment in the general welfare at a considerable cost to himself apart from the expense of subscribing to the course; therefore be it

Resolved, By the House of Delegates of the American Medical Association that this Association request the adoption of national legislation providing income tax exemption for the actual expenses incurred by a physician in taking a recognized postgraduate course.

Resolution on Medical Care of Veterans

Dr. W. A. Coventry, Minnesota, presented the following resolution, which was referred to the Reference Committee on Insurance and Medical Service:

WHEREAS, The effective medical and surgical care of the veteran with service-connected disability is not only of paramount personal importance to the veteran, but is of national concern to citizens and in particular to the physicians of this country; and

WHEREAS, Adequate medical care of the veteran can be achieved only with the assurance of free choice of physician and a minimum of administrative regulation to expedite prompt care; and

WHEREAS, These fundamentals are preserved by home-town medical care plans, developed by state medical associations; and

WHEREAS, Such plans are not only an important contribution to adequate care of the veteran, but are a bulwark against the impersonal practice of medicine by an impersonal government; therefore be it

Resolved, By the House of Delegates of the American Medical Association that (1) the Board of Trustees be instructed to assist in the further development of such plans; (2) each state medical association be urged to develop plans of direct contract with the Veterans Administration for the adequate care of the veteran with service-connected disabilities; (3) the Veterans Administration be commended for its cooperative attitude in those states where such plans exist, and (4) the Veterans Administration be urged to cooperate in the further extension of the home-town medical program to those states not now having them.

Resolution on Medical Care of Civilian Employees of Armed Forces

Dr. Eugene F. Hoffman, California, presented the following resolution, which was referred to the Reference Committee on Emergency Medical Service:

WHEREAS, Under reorganization of the Armed Forces, it is proposed to give medical care to some 400,000 civilian employees of the Armed Forces; and

WHEREAS, Military medicine should be limited to care of military personnel in line with the need of the military to maintain tactical mobility; now therefore be it

Resolved, That the American Medical Association so direct its forces that the medical care of these civilians be retained in private practitioners' hands and that the Armed Forces not be permitted to expand their medical services to furnish medical care for these civilians.

Resolution on Early Detection of Diabetes

Dr. Leo F. Schiff, New York, presented the following resolution, which was referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, The early detection of diabetes mellitus is necessary for the welfare of those having the disease; and

WHEREAS, Studies indicate that it is necessary to screen a large number of persons prior to confirmatory diagnostic examinations by physicians in order to find the estimated one million unknown diabetics; and

WHEREAS, the American Medical Association has already recognized the need for an organized program by approving the Diabetes Detection Drive of the American Diabetes Association; and

WHEREAS, The principle of individuals testing their own urine for glycosuria, including the recommendation that individuals with positive tests consult their own physicians, has been approved by the American Diabetes Association; and

WHEREAS, For many years the medical profession has urged diabetics to test themselves for glycosuria and simple methods are now available to all individuals for self-use in detection of glycosuria; therefore be it

Resolved, That as a means of facilitating the detection of diabetes, the House of Delegates of the American Medical Association approve the principle of individuals periodically testing themselves for glycosuria and reporting abnormal results to their own physicians.

Resolution on Costs of Medical Care

Dr. William M. Cockrum, Indiana, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, In the minds of the American people, the costs of physicians' services, hospital services, nurses' services and druggists' services are all grouped together and called medical care costs; and

WHEREAS, The costs of physicians' services represent but a minor portion of these total costs; therefore be it

Resolved, That the Board of Trustees of the American Medical Association be requested to institute immediately a study which will result in educating the American people as to the differentiation between the costs of physicians' services and the costs of hospital services in hospitalized illness.

Resolution on American Medical Association Dues

Dr. R. B. Homan, Texas, presented the following resolutions, which were referred to the Reference Committee on Amendments to the Constitution and By-Laws:

WHEREAS, The House of Delegates of the American Medical Association in December 1949 levied dues of $25 for 1950 membership in the American Medical Association, the first such assessment in history; and

WHEREAS, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is the official publication of the American Medical Association; and

WHEREAS, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is recognized as the most important publication in the fields of scientific medicine, medical economics, medical jurisprudence, medical public relations and medical statesmanship; and

WHEREAS, It is customary that the subscription price of the official publication of any medical organization be included as part of the dues of such organization; and

WHEREAS, No such provision has been made in the assessed dues to the American Medical Association, but rather that dues of $12 for Fellowship in the American Medical Association is required for subscription to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION or the individual physician must subscribe independently; and

WHEREAS, It is in the interest of the American public and of the American medical profession that every member of the American Medical Association receive THE JOURNAL; and

WHEREAS, It is estimated that possibly only one-half of the active physicians of America, those for whom THE JOURNAL is primarily intended, receive this important publication, and out of the approximately 135,000 copies of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION published weekly, 13,000 are sent to foreign countries, 1,326 to the Armed Services, 268 to the Public Health Service, and no statistics are available as to the number of copies sent to libraries, scientists, research organizations, etc.; and

WHEREAS, Increased circulation tends to increase the volume of advertising and the rates and hence increase revenue from THE JOURNAL, which would largely, if not completely, offset additional cost; now therefore be it

Resolved, That the house of delegates of the State Medical Association of Texas, in regular session assembled this first day of May, 1950, strongly recommend that subscription to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION be included in the dues of the American Medical Association and hereby petition the American Medical Association so to provide; and be it further

Resolved, That the house of delegates of the State Medical Association of Texas instruct its delegates to the American Medical Association to present these resolutions to the House of Delegates of the American Medical Association for its consideration; and be it further

Resolved, That copies of these resolutions be distributed to the officers, to the Board of Trustees and to the various delegates of the American Medical Association on the day of its presentation to the House of Delegates of the American Medical Association in regular session in San Francisco on June 26, 1950.

Resolution on Establishment of Committee on Problems of Alcoholism

Dr. Joseph P. Henry, New York, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, The broad question of the prevention and treatment of chronic alcoholism is a matter of immediate and deep concern to the medical profession of the State of New York, said medical profession being keenly conscious of its obligation to assist in reducing the incidence of chronic alcoholism, in providing adequate facilities for the medical, clinical, and institutional care and reclamation of these sufferers, and in reestablishing the compulsive drinker as a useful and productive member of society; and

WHEREAS, The Medical Society of the State of New York has manifested its interest and concern and that of New York State physicians in this challenging problem by creating a special committee on the problems of alcoholism, which special committee has functioned for approximately two years for the development and operation of a sound, well-balanced program—preventive, therapeutic and rehabilitative—as well as for the stimulation of increased public interest in this vital question, frequently referred to as America's Number Four Public Health Problem; and

WHEREAS, The problem of chronic alcoholism, in the opinion of the New York State medical profession, is one of such magnitude and social-economic importance to the entire nation that there has arisen among members of the medical profession of New York State widespread demand that medicine recognize its responsibility to assume the active leadership and direction of a movement, on a national level, to increase professional and public understanding of this problem, to coordinate all available resources for the care and rehabilitation of the chronic alcoholic, to cooperate with government-sponsored projects, and to devise constructive methods for the alleviation and solution of the problem of alcoholism; now therefore be it

Resolved, That the American Medical Association establish at the earliest feasible date a special committee on the problems of alcoholism, to formulate and put into effect, on a nation-wide basis, a comprehensive and effective program for medicine's aggressive participation in the work of solving the problems of alcoholism, such program to include a vigorous recommendation to each constituent state and component county medical society that it establish and support actively a special committee patterned after the special committee on the problems of alcoholism of the Medical Society of the State of New York.

Resolution on Expenditure for Advertising

Dr. Roland W. Stahr, Nevada, presented without reading a resolution asking that the Board of Trustees, be requested to reconsider its action in authorizing expenditure of money on questionably effective advertising, which was referred to the Reference Committee on Executive Session.

Resolution on Twelve Point Program

Dr. William F. Costello, New Jersey, presented the following resolution, which was referred to the Reference Committee on Insurance and Medical Service:

WHEREAS, The Twelve Point Program of the American Medical Association for the Advancement of Medicine and Public Health contains the following recommendation, in Point Number 3, relating to Voluntary Insurance: "Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas. Aid through the states to the indigent and medically indigent by the utilization of voluntary hospital and medical care plans with local administration and local determination of needs"; and

WHEREAS, The American Medical Association has steadfastly maintained that the problem of assuring adequate medical care to all the people can be solved without resort to any national legislation that would establish a governmental monopoly in the provision of medical service or impose governmental dictation and control over the practice of medicine; and

WHEREAS, The American Medical Association believes that, as a matter of sound public policy, all agencies of government should stimulate and encourage the voluntary cooperative agencies created by the people to solve their social problems, never supplementing or superseding such agencies; and

WHEREAS, The American Medical Association recognizes an obligation to translate into action its declared purposes concerning the "further development," "wider coverage" and "extension" of voluntary hospital and medical care plans; therefore be it

Resolved, By the House of Delegates of the American Medical Association, in annual meeting assembled in San Francisco that the following statement and proposals be approved and promulgated as the official action of the American Medical Association:

PREAMBLE

The American Medical Association favors, and always has favored, a constructive approach to the solution of the national health problem. The solution of medical and health problems should be undertaken in a realistic, scientific spirit. Moreover, since the health of the people transcends all political considerations, it must be considered on a non-partisan basis.

The American Medical Association believes there are areas in which government may benficially cooperate with the citizens, individually or acting through voluntary associations, in furthering a health program, in the interest of all the people, and without jeopardy to individual liberty. It is generally recognized that voluntary cooperative effort should have priority at all times. Government should seek to promote and supplement the efforts of free citizens, (not to supplant or supersede voluntary action) whenever voluntary cooperative effort can meet the need.

Any constructive approach to solution of the health problem must take into account the several classifications of those who require medical care, namely: (1) Those who are able to sustain the full cost of providing for hospital and medical care; (2) Those who are employed for wages and salaries in the medium income brackets; (3) The "medically indigent," whose income does not suffice to meet the costs of catastrophic illnesses; (4) The totally indigent, who are on public assistance rolls, and (5) The chronically ill.

Any adequate program to meet health needs should include medical and hospital care. Insofar as possible, such care should be so inclusive that everyone may budget in advance against the financial burden of sudden illness. In addition, the program should assure every community of basic health protection through well organized professional public health departments.

No matter what program is devised, it should be experimental, flexible and evolutionary in character. It should be sufficiently concrete as to be readily understood and practically adaptable everywhere.

The American Medical Association, therefore, offers the following proposals for a cooperative health program, in which national, state and local governments may participate, without endangering individual initiative, personal freedom or scientific progress. The sequence in which this program is set forth does not necessarily indicate the relative importance of its parts.

PROGRAM

1. Voluntary nonprofit organizations should be used as the best means of budgeting hospital and medical service for the individual and his family. (*a*) The Blue Cross movement, providing for hospital care on a non-profit, minimum cost basis, is recognized as the outstanding development in this direction. Blue Cross has extended to nearly every part of the United States. There are now 96 Blue Cross organizations with a combined enrolment of more than 35 million people. (*b*) The Blue Shield movement, launched within the past decade, has made

possible the prepayment of medical care on a budget basis, which in some areas means that the doctor's bill for eligible care is covered in full for 80 per cent of subscribers and their dependents, of whom there are now more than 12 million persons enrolled throughout the United States.

2. For persons able and willing, at their own expense, to meet the cost of enrolment in such voluntary nonprofit organizations, we propose that the premiums be made eligible for deduction for income tax purposes, regardless of the financial status of the subscriber or the amount of the premium paid.

Such deduction is equitable, inasmuch as employers who pay or contribute to the enrolment cost for their employees are already permitted to deduct these costs for income tax purpose, in cases where the latter enters into the computation of federal income tax.

3. For employed groups, it is encouraging to note the growing practice of employer contributing toward the cost of health and welfare programs for his employees and dependents. As mentioned, such payments are usually tax-deductible as part of the cost of production, and are being increasingly recognized as a legitimate part of that cost.

4. As an immediate encouragement toward employer contribution toward the enrolment cost of hospital and medical protection, government, at every level from municipal to national, should promote the program of such protection for its own employees, by assuming either a part or all of the cost of enrolment in voluntary prepayment plans.

5. As rapidly as possible, consistent with actuarial experience and sound administration, the services eligible under such voluntary non-profit organizations should be extended to cover all nonchronic ailments on an inclusive basis.

6. After sufficient enrolment is attained, we recommend that consideration be given the practicability of providing medical care protection on an inclusive basis to subscribers in voluntary, nonprofit plans, regardless of the financial status of the subscribers, and with no salary limitation for over-all inclusive service.

7. We propose that immediate study be given the possibility of providing voluntary, nonprofit protection for those who are "medically indigent" though not on public assistance rolls, through the use of state and local funds for the purchase of such protection. As a rule of thumb to determine "medical indigency," the criterion might be the question whether one's taxable income is such as to exempt him from payment of federal income taxes.

8. For the medical and hospital care of persons on public assistance rolls, we recommend the providing of service through state-county-municipal funds, perhaps utilizing on a cost basis the voluntary nonprofit organizations for the actual provision of the required services.

9. There is no actuarially sound basis yet established for treating the chronically ill as an insured group. We suggest, therefore, that study be given to providing care for needy persons suffering from chronic illness, on a cost basis at state level, again with the possibility of utilizing the facilities of voluntary nonprofit organizations.

10. The need for better local public health service in most areas of the United States has long been recognized, but progress in providing it has been discouragingly slow. We recommend that every state government adopt such legislation as may be needed to permit consolidation of local health jurisdiction into districts having sufficient size and resources to support at least a minimum staff and facilities for complete modern basic public health protection.

11. There are numerous areas in certain states where the private practice of medicine is economically or professionally impractical, because the areas will not sustain a sufficient number of capable physicians on a fee-for-service basis, or because hospital facilities are inadequate or lacking. Progress is being made under the Hill-Burton Hospital Survey and Construction Act toward meeting the deficit of hospital accommodations. We suggest exploring the possibility of the U. S. Public Health Service providing competent physicians to such areas when requested by state or local agencies.

12. Such a cooperative health program as is here envisaged may require a considerable increase in the number of physicians, health officers, nurses and other medical personnel. Ideally, every qualified person desiring to enter the field of medicine and public health should be able to do so. We support a program of government subsidy, where needed, to assist qualified individuals in obtaining professional training and to expand professional training facilities where it is found possible to expand existing schools or to establish new ones. We believe that any governmental subsidy that may be provided for these purposes should be granted unconditionally to approved institutions.

The American Medical Association submits that through such voluntary cooperative action, the problem of attaining an adequate national health program can and will be solved.

Resolution on State Board Examinations in Pediatrics

Dr. William Weston, Section on Pediatrics, presented the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, The recent survey of child health services has demonstrated that 75 per cent of the medical care of children is performed by the general practitioner and has an individual significance; and

WHEREAS, In many state board examinations there is not even a question on pediatrics; and

WHEREAS, It is believed that a separate examination on pediatrics would encourage the students and interns to inform themselves in pediatrics; therefore be it

Resolved, That the House of Delgates of the American Medical Association urges the various state medical societies to use their influence with the various state boards to have a separate examination in pediatrics included in the examination, and that a pediatrician be one of the examiners.

Resolutions on Restrictive Membership Provisions

Dr. J. Morrison Hutcheson, Virginia, presented the following resolutions, which were referred to the Reference Committee on Miscellaneous Business:

WHEREAS, This House of Delegates recognizes that certain constituent and component societies of the American Medical Association have had or now have restrictive provisions as to qualification of membership based on race and that this question is of deep concern to many interested parties; and

WHEREAS, It is desirable that the attitude of not only the entire membership of the American Medical Association but of the whole medical profession be accurately reflected on this issue; and

WHEREAS, It is the policy of the American Medical Association to broaden the scope of educational facilities and raise the ethical levels of practice of all physicians in order to improve the quality of medical care for the American people; therefore be it

Resolved, That these facts be brought to the attention of all component and constituent societies appreciating that membership is a component and constituent society responsibility; and be it further

Resolved, That constituent and component societies having restrictive membership provisions based on race study this question in the light of prevailing conditions with a view to taking such steps as they may elect to eliminate such restrictive provisions.

Resolutions on Exfoliative Cytologic Diagnostic Procedure

Dr. L. A. Alesen, California, presented the following resolutions, which were referred to the Reference Committee on Hygiene and Public Health:

Resolved, That as a statement of policy the American Medical Association is opposed to the centralization of facilities for the initial diagnosis of malignant disease by means of examinations of tissues, exudates or bodily excretions by whatever name the procedure may be called. This is specifically meant to include any exfoliative cytologic diagnostic procedure proposed as a part of any mass survey conducted by federal, state or municipal government or political subdivision thereof or by any private organization sponsored or supported by such governmental agency or by endowments or public voluntary contributions; and be it further

Resolved, That exfoliative cytologic examinations incident to mass surveys be done at the local level by pathologists licensed to practice medicine. Should the local pathologist desire consultation, in accordance with usual custom he may refer the material to any pathologist of his choice.

Messages of Regret to Vice Speaker James R. Reuling and Family of Dr. A. E. Cardle

It was moved by Dr. H. H. Shoulders, Tennessee, that a telegram be forwarded to Dr. James R. Reuling, Vice Speaker, expressing regret that he could not be present, and the motion was seconded by Dr. Walter E. Vest, West Virginia, and carried.

Dr. Gilson Colby Engel, Pennsylvania, moved that an expression of regret be recorded regarding the untimely death of Dr. A. E. Cardle, Minnesota, and that a telegram of condolence be sent to his family. The motion was seconded by Dr. Allen H. Bunce, Georgia, and carried.

The House, on motion of Dr. William Weston, Section on Pediatrics, duly seconded by Dr. H. H. Shoulders, Tennessee, and carried, recessed at 3:45 p. m., to meet at 1:00 p. m., Tuesday, June 27.

Second Meeting—Tuesday Afternoon, June 27

The meeting convened at 1:20 p. m., Tuesday, June 27, with Dr. F. F. Borzell, Speaker, in the Chair.

Report of Reference Committee on Executive Session

Dr. David B. Allman, Chairman, presented the following report, which was adopted on motion of Dr. Allman, seconded by Dr. William Weston, Section on Pediatrics, and carried:

Your Reference Committee on Executive Session finds nothing in the Resolution on Expenditure for Advertising introduced by Dr. Roland W. Stahr, Nevada, to warrant an Executive Session. It does, however, wish to call the attention of the Board of Trustees and the Coordinating Committee to the matter.

Message from Dr. T. C. Routley

Dr. Louis H. Bauer, Chairman, Board of Trustees reported the receipt of a telegram from Dr. T. C. Routley, Secretary General of the Canadian Medical Association, wishing the House a successful meeting and extending his regrets that he could not be present. On motion of Dr. Charles H. Phifer, Illinois, seconded by Dr. Walter P. Anderton, New York, and carried, the Secretary was requested to wire Dr. Routley an expression of appreciation for his good wishes.

Recess

The Speaker announced that the House would adjourn to set in session at the Inaugural Meeting at 5:30 p. m. this evening and to meet for business at 9:00 a. m., Wednesday, June 28.

On motion of Dr. William Weston, Section on Pediatrics, seconded by Dr. Charles H. Phifer, Illinois, and carried, the House recessed at 1:30 p. m.

Third Meeting—Wednesday Morning, June 28

The House reconvened in the Rose Room, Palace Hotel, San Francisco, Wednesday, June 28, and was called to order by the Speaker, Dr. F. F. Borzell, at 9:10 a. m.

Report of Reference Committee on Credentials

Dr. Edward P. Flood, Chairman, reported the presence of a quorum and the Speaker declared this meeting of the House open for business.

Telegram from Vice Speaker James R. Reuling

The Speaker announced receipt of a telegram from Vice Speaker James R. Reuling stating that Mrs. Reuling was making satisfactory progress.

Report of Reference Committee on Reports of Officers

Dr. Everett P. Coleman, Illinois, for Dr. Charles F. Strosnider, Chairman, presented the following report, which was adopted section by section and as a whole on motions of Dr. Coleman, duly seconded and carried:

Speaker's Address

Your Committee commends the scholarly address of Dr. Borzell. It wishes to emphasize the following points which he has brought out.

1. A realization of the fact that we are the first and main object of the attack which is intended to turn the entire country over to the hordes of statism.

2. The fact that the American Medical Association in its efforts to aid the American doctor to maintain his professional independence must also protect him from misinformed members of allied groups. That we must present our ideas and information to these allied groups so that they will assist and not oppose us in our legislative efforts.

3. Recommendation that sponsors of resolutions should be present at reference committee hearings so as to be able to furnish the background of such resolutions.

4. Suggestion that the House make every effort to avoid the appointment of overlapping committees when established committees are already available.

5. Request for the appointment of an interim committee of five members on constitution and by-laws to clarify and expedite any needed changes. Your committee further recommends that his suggestion that this be made a permanent committee be given serious consideration.

Finally, your committee wishes to commend the Speaker for the efficient and courteous manner in which he presides over this body.

Address of the President

The address of our President, Dr. Ernest E. Irons, reflecting as it does the long study and great amount of work he has put forth in the past year is a reaffirmation of the faith so ably expressed in his former addresses. This address is a study indeed of the present medical-political problem before us. It would be extremely difficult to break this down as the entire address is a cogent, deep and convincing work on our present status. The "theme song" developed in such a scholarly manner is equally applicable to that of business, industry and other professions as well as to the medical profession.

In a masterful way he reviews the background of the things that have made this country great and he warns us in no uncertain terms against the dangers that lurk along the paths that lead to state socialism. Dr. Irons has taken issues which may have been confused in the minds of many and has clarified them. His emphasis on the importance of the physician realizing his political obligations as a citizen to the extent of voting, his emphasis on a continuing increase in voluntary insurance and the importance of a continuing effort to educate the public in a realization of our common problems make this address one which should be required reading for every doctor.

Your committee feels that this address should be published in every state medical journal at the earliest possible opportunity and that copies of it should be sent to the national and state officers of the allied professions to encourage its publication by these organizations throughout the entire country.

Respectfully submitted,

Charles F. Strosnider, Chairman.
Ralph B. Eusden.
William H. Halley.
Everett P. Coleman.
C. H. Richardson Sr.

Report of Reference Committee on Rules and Order of Business

Dr. Jesse D. Hamer, Chairman, presented the following report, which on motion of Dr. Hamer, seconded by Dr. Charles H. Phifer, Illinois, and carried, was adopted:

Your reference committee has thoroughly reviewed the wording and content of the Resolution on Voting by Ballot and is in complete sympathy with its intent. The committee therefore recommends the adoption of this resolution.

Respectfully submitted,

Jesse D. Hamer, Chairman.
Frank W. Snow
William A. Hyland
George A. Earl

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. E. Vincent Askey, Chairman, presented the following report:

Report of Board of Trustees

Your committee will first consider those items of the Board of Trustees report which have been published in the Handbook and which you all have had an opportunity to study. Fortunately, our Speaker removed from our committee and assigned to others that portion of the report having to do with membership dues, the Committee on General Practice, the Coun-

cil on National Emergency Medical Service, the Commission on Chronic Illness and the Committee on Legislation; therefore we make no report on these items.

1. Financial Statement: Your committee notes with satisfaction that a very high percentage of our members paid the voluntary additional assessment as of December 31, 1949, before the dues were made mandatory. It believes that this indicates a strong unified profession and strongly contradicts arguments of objection that have arisen from a small number of dissenting persons within our own ranks and from those outside who have attempted to obstruct our endeavors. It also notes that in spite of added expenses our ordinary income exceeded our expenses by $106,817.56. It appears to your committee that a satisfactory situation exists and that our financial affairs have been handled in an exceedingly able manner by our Board of Trustees and our General Manager and the committee recommends approval of this portion of the report of the Board of Trustees.

2. Report of the Committee on Displaced Physicians: Your committee in a limited time cannot digest the needs or analyze procedures as adequately as did the special committee. Its report seems complete and concise. The report was tabled at the last meeting of this House of Delegates in December, 1949. It was directed to be called forth for discussion at this meeting of the House of Delegates. In order to accomplish that purpose, your committee presents it to you. In order to put it before you, I move you the adoption of the Report of the Committee on Displaced Physicians as contained in this part of the Board of Trustees report.

3. Student American Medical Association: Since the House of Delegates specifically directed the Board of Trustees to formulate appropriate plans to develop a Junior American Medical Association, your committee believes that this report fulfills that duty. This report gives adequate formula for the development of such an organization but does not actually implement the establishment of it. Your committee recommends approval of the plan as detailed by the Board of Trustees and in addition recommends that the Board of Trustees be requested to initiate and implement the establishment of such an organization and give it the proper name through the appropriate agency of the American Medical Association.

4. Survey of Physicians' Incomes: This is merely a report by the Board of Trustees that such a survey has been carried out and is in progress of evaluation. The results of the questionnaire will be made available to the Bureau of Medical Economic Research of the American Medical Association. Since no action at this time is involved as to the desirability of such a survey inasmuch as it is already an accomplished fact, though your committee questions the desirability of such survey, your committee makes no further comment. It recommends that this report from the Board of Trustees be received and no further action be taken at this time.

5. The Surveys of Medical Education and Medical Practice in Great Britain: The reports by the two committees, the first on the effect of legislation such as is now in force in England on medical education and the second on the status of medical care under such legislation, are voluminous and thorough. Your committee cannot in its short study hope to digest all this information for you. That duty devolves on you as individuals. It believes that these reports are extremely valuable and will be used by our established councils of the American Medical Association. The reports will be published seriatim in The Journal of the American Medical Association and will be of great value to all the doctors of America and to their patients who should be informed in regard to these matters by their physicians. Your committee commends the two committees for their reports and urges further dissemination of the contents.

6. Hearings on the Taft and Hill Bills: Since June 1949, the acute importance of these two bills has decreased. Your committee believes that the Board of Trustees and the Committee on Legislation are fully aware of the situation and are alert to potentialities involved in such proposals. It believes that the Board of Trustees has met the intent of the resolutions in holding hearings. It recommends that the report of the Board of Trustees be accepted as fulfilling their duty in this regard.

7. Resolution on Free Choice of Physicians for Federal Employees: In view of the recommendation by the committees which considered this problem that more study is needed and because the Board of Trustees confirms that recommendation, your committee proposes that the Board of Trustees inform the authors of the resolution as to the situation and with them carry out such studies as are found necessary.

8. Expansion of the Washington Office: Dr. Bauer in his supplementary report indicated that continued implementation and increased efficiency of our Washington Office is definitely planned. The culmination of these plans, it is believed, should be attained rapidly and without delay. Your committee recommends and urges such action.

9. Bulletin for Woman's Auxiliary: The decision of the Board of Trustees in cancelling the project mainly because the Auxiliary did not desire such publication, your committee believes is wise.

10. The Treasurer's and Auditors' Reports: Your committee believes that the report of the Treasurer is a factual statement, and it is certified to by a reliable firm of auditors. It sees nothing to criticize and recommends that these reports be accepted.

Supplementary Report of the Board of Trustees

11. Quality of Medical Care in a National Health Program: Your committee approves the action of the Board of Trustees in this matter.

12. Resolutions on Medical Care of Veterans: These are resolutions presented by Dr. Allen H. Bunce at the request of the Fulton County Medical Society and the Medical Association of Georgia objecting to the unjustified care that is being furnished for veterans who are not indigent for non-service-connected disabilities. These resolutions urge that the public be more adequately informed as to the actual requirements of veterans to receive medical care from the United States Government. Your committee believes that this, in essence, agrees with previous action of this House of Delegates. It approves of the principles involved as stated in these resolutions. It believes that the previous actions of the House of Delegates were correct and as a committee it reaffirms them.

Your committee recommends adoption of this portion of the report of the committee as a substitute resolution for that introduced by Dr. Bunce.

13. Resolutions on Purveyal of Medical Service, Resolutions on Hospital Practice of Medicine, Resolutions on Report of Committee on Hospitals and the Practice of Medicine, Resolutions on Enforcement of Principles of Medical Ethics and Resolutions on Practice of Medicine by Hospitals: All these resolutions, having to do with the purveyal of medical services and the practice of medicine in hospitals, are similar in content and intent. Your committee believes that all points brought up in these resolutions are covered by its report on the Report of the Committee on Hospitals and the Practice of Medicine, referred to your committee, which presents its report on that matter in substitution for these various resolutions. Your committee asks approval of its interpretation as to the classification of these resolutions.

14. Report of the Committee on Hospitals and the Practice of Medicine: The Board of Trustees states that this report removes all of the legal objections which were present in the original report. Your committee therefore will present to you this report as amended by it for your consideration.

If you will take your copy of the report which was placed in your hands at the previous meeting of this House of Delegates I believe you will be able to follow my presentation and avoid much misunderstanding.

Your committee presents to you the first and second pages without change. On page 3, it presents without change the first four paragraphs on the page. At that point it wishes to make an addition as follows: "On page 31 of the Constitution and By-Laws as printed in the Handbook under the Duties of the Judicial Council, is found the following:

"The Council shall have jurisdiction on all questions of medical ethics and the interpretation of the laws of the Association.

"The Council at its discretion may investigate general professional conditions and all matters pertaining to the relations of physicians to one another and to the public, and may make such recommendations to the House of Delegates or the constituent associations as it deems necessary.

"The Council shall have authority to request the President to appoint investigating juries to which it may refer complaints or evidence of unethical conduct which in its judgment are of greater than local concern. Such investigating juries, if probable cause for action be shown,

shall submit formal charges to the President, who shall appoint a prosecutor to prosecute such charges against the accused before the Judicial Council in the name and on behalf of the American Medical Association. The Council may acquit, admonish, suspend or expel the accused."

Your committee proposes the following recommendation: If and when a physician is found to be unethical by the proper authorities as established through channels specified in the Constitution and By-Laws, and he is still retained on the staff of any hospital approved for resident or intern training by the Council on Medical Education and Hospitals, it shall be the duty of the Judicial Council to request the Council on Medical Education and Hospitals to show cause as to why that Council should not remove such hospital from the approved list under the assumption that the hospital is just as unfit for the training of young physicians for unethical reasons as it is unfit because it may not or does not have proper filing systems for its laboratory or clinical records.

Your committee then continues the report unchanged on the rest of page 3 and page 4 and on the first two lines of page 5 but then in the fourth line removes the word "the" before "Blue Shield" and removes the word "commissions" after the words "Blue Cross."

It then recommends complete elimination of the sentence beginning "In addition it also believes. . . ." It believes that this will avoid some complications. The rest of page 5 as well as pages 6 and 7 are retained unchanged.

The first two paragraphs on page 8 are retained unchanged but your committee believes that the material on the rest of page 8 and on page 9 down to the final paragraph which includes the so-called McKittrick report is not germane to the problem and to the principles stated in the portion of the report that precedes that. It therefore deletes in entirety that portion of the report.

The final paragraph on page 9 is retained.

Your committee believes that the suggestions on the next two pages headed "Supplementary Report" should be referred to the Judicial Council for its information in establishing proper procedures by which these proposals shall to the greatest possible extent be accomplished.

Your reference committee presents the following principles and asks your approval of them as additional guides to individual physicians, county medical societies and state medical associations:

1. A physician should not dispose of his professional attainments or services to any hospital, corporation or lay body by whatever name called or however organized under terms or conditions which permit the sale of the services of that physician by such agency for a fee.

2. Where a hospital is not selling the services of a physician, the financial arrangement if any between the hospital and the physician properly may be placed on any mutually satisfactory basis. This refers to the remuneration of a physician for teaching or research or charitable services or the like. Corporations or other lay bodies properly may provide such services and employ or otherwise engage doctors for those purposes.

Resolutions on Recognition of Practice of Anesthesiology, Pathology, Physical Medicine and Roentgenology as Practice of Medicine: For the purpose of clarification your committee makes the addition of the following statement in order to clarify a misunderstanding that seems to be held by some persons, the American Hospital Association and other organizations throughout the United States. In our opinion, the practice of anesthesiology, pathology, physical medicine and radiology are an integral part of the practice of medicine in the same category as the practice of surgery, internal medicine or any other designated field of medicine. Your committee therefore substitutes this statement for the resolutions presented by Dr. Di Natale in regard to this matter and recommends approval of this portion of its report as disposing of these resolutions.

Your committee recommends approval of its report as presented to you with the changes and amendments detailed above.

Respectfully submitted,

E. VINCENT ASKEY, Chairman.
GEORGE A. UNFUG.
JAMES L. WHITEHILL.
JOHN K. GLEN.
CHARLES T. STONE.

On motions of Dr. Askey, duly seconded and carried, the first three sections of the report were adopted.

It was moved by Dr. Askey that section 4 of the report of the reference committee, recommending its adoption and suggesting that no further action be taken at this time be adopted. The motion was seconded by Dr. William Weston, Section on Pediatrics, and amended by Dr. H. P. Ramsey, District of Columbia, so that the words "though we question the desirability of such surveys" be deleted from the report. The amendment was seconded by Dr. Walter P. Anderton, New York, and carried. This section of the report of the reference committee was then adopted as amended.

Sections 5 to 13 inclusive were adopted on motions of Dr. Askey, duly seconded and carried.

Dr. Askey moved adoption of section 14 of the report of the reference committee, dealing with the Report of the Committee on Hospitals and the Practice of Medicine and the motion was seconded by Dr. Charles H. Phifer, Illinois, and discussed by Drs. Rollo K. Packard, Illinois, and Dr. Henry S. Ruth, Section on Anesthesiology, who suggested the deletion of the paragraph on page 3 of the Report of the Committee on Hospitals and the Practice of Medicine beginning "Another matter" and the next paragraph which runs over to the next page. The amendment was seconded by Dr. Val H. Fuchs, Louisiana, discussed by Dr. Askey, Dr. Allen H. Bunce, Georgia, Dr. Louis A. Buie, Section on Gastro-Enterology and Proctology, and Dr. Ruth, and lost by a rising vote.

Dr. Askey's motion to adopt the report of the reference committee on section 14 was then further discussed by Drs. H. P. Ramsey, District of Columbia, Louis H. Bauer, Chairman, Board of Trustees, and L. S. McKittrick, Massachusetts, who moved that the paragraphs numbered from 1 to 4, especially 2 to 4 inclusive, just before the last paragraph in the Report of the Committee on Hospitals and the Practice of Medicine, be retained as submitted rather than deleted as suggested in the report of the reference committee. The motion to amend was seconded by Dr. George S. Klump, Pennsylvania, and discussed by Dr. Askey; Dr. Edgar P. McNamee, Ohio, and Dr. John M. Fallon, Massachusetts, who moved an amendment to the amendment that paragraphs numbered 1, 2 and 3 be accepted but omit paragraph 4. The motion to amend the amendment was seconded by Dr. Charles H. Phifer, Illinois, and carried by a rising vote.

The discussion on the amendment was then continued by Drs. Henry S. Ruth, Section on Anesthesiology; Albert F. R. Andresen, New York; Clark Bailey, Kentucky; Donald Cass, California; A. S. Giordano, Indiana; George S. Klump, Pennsylvania; George A. Unfug, Colorado; Edgar P. McNamee, Ohio; the Speaker, and Dr. Askey, after which the motion to amend was put to a vote and lost.

There was further discussion on the motion to adopt section 14 of the report of the reference committee by Dr. Askey; the Speaker; H. P. Ramsey, District of Columbia; Dr. Louis H. Bauer, Chairman, Board of Trustees; Dr. E. R. Cunniffe, Chairman, Judicial Council and Dr. W. R. Brooksher, Arkansas, who moved that this section of the report be rereferred to the reference committee and the report as amended, be mimeographed and distributed to the House and the motion was seconded by Dr. George S. Klump, Pennsylvania, and discussed by Dr. George F. Lull, Secretary, Dr. W. R. Brooksher, Arkansas, and Dr. Rollo K. Packard, Illinois, who moved that the matter be laid on the table, which motion was duly seconded and lost. The Speaker then put the motion to refer back to the reference committee section 14 in its report and the motion was lost by a rising vote.

There being no further discussion on Dr. Askey's motion to adopt section 14 in the report of the reference committee, the motion was carried.

On motion of Dr. Askey, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried, the report of the reference committee was adopted as a whole as amended.

Amended Report of the Committee on Hospitals and the Practice of Medicine

In June 1949, the House of Delegates approved a report, as revised by the Reference Committee, submitted by the Committee on Hospitals and the Practice of Medicine. Subsequent to this meeting and after receiving a legal opinion from the Association's general counsel, the Board of Trustees referred the entire report back to the House with specific recommendations concerning certain portions of the report.

In December 1949, the House of Delegates approved the following resolution in regard to this report:

". . . that in the interests of maintaining high professional standards and protecting the public health, the House of Delegates reaffirms the philosophy underlying and the principles enunciated in the Hess Committee report, and that in view of the possible legal technicalities, the activation of the Hess Committee report be deferred until after the next meeting of the House of Delegates and that between this and the next meeting of the House of Delegates the original report be re-referred to the original committee or reasonable facsimile thereof and that the committee be instructed to consider ways and means of activating the original report in accordance with the principles expressed therein and in accordance with legal considerations which must be present."

In view of this resolution of the House of Delegates, the Correlating Committee on Extension of Hospitals and Other Facilities of the Council on Medical Service consisting of the original members of the Committee on Hospitals and the Practice of Medicine plus two additional members appointed by the Council has undertaken to restudy the problem and rewrite the report in such manner as to meet the directives of the House of Delegates.

In addition to studying the original report, the Committee requested expressions of opinion on the part of the various specialty groups and of the various hospital associations and also granted them permission to have representatives appear before the Committee if they so desired.

The Committee wishes to report again that so far as it can determine, on the basis of a study made by the Bureau of Legal Medicine and Legislation of the American Medical Association, as a matter of law the corporate practice of medicine is illegal in most states. In almost all instances the classic example given by the courts of the type of corporate practice of a profession that is illegal is the instance in which a corporation hires a professional man and then sells his services to the public on a fee basis for the profit of the corporation. Such exceptions as there are refer to statutory legislation in several states permitting certain modifications of this general law. It must also be remembered that fee splitting with a corporation is just as unethical as fee splitting with another physician.

In addition to being guided by the laws of the various states, physicians in their relationships with hospitals must be guided by the Principles of Medical Ethics of the American Medical Association. Those sections of the Principles which have a distinct bearing on these relationships are as follows:

Chapter I, Sec. 3. "Groups and Clinics—The ethical principles actuating and governing a group or clinic are exactly the same as those applicable to the individual. As a group or clinic is composed of individual physicians, each of whom, whether employer, employee or partner, is subject to the principles of ethics herein elaborated, the uniting into a business or professional organization does not relieve them either individually or as a group from the obligation they assume when entering the profession."

Chapter III, Article VI, Sec. 2. "Conditions of Medical Practice—A physician should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patients concerned might be deprived of immediately necessary care."

Chapter III, Article VI, Sec. 3. "Contract Practice—Contract practice as applied to medicine means the practice of medicine under an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization, political subdivision or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for a salary or for a fixed rate per capita.

"Contract practice *per se* is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these Principles of Medical Ethics or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered."

Chapter III, Article VI, Sec. 6. "Purveyal of Medical Service—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people."

In conclusion, the Principles of Medical Ethics states: "These principles of medical ethics have been and are set down primarily for the good of the public and should be observed in such a manner as shall merit and receive the endorsement of the community . . ."

On page 31 of the Constitution and By-Laws as printed in the Handbook under the Duties of the Judicial Council, is found the following:

"The Council shall have jurisdiction on all questions of medical ethics and the interpretation of the laws of the Association.

"The Council at its discretion may investigate general professional conditions and all matters pertaining to the relations of physicians to one another and to the public, and may make such recommendations to the House of Delegates or the constituent associations as it deems necessary.

"The Council shall have authority to request the President to appoint investigating juries to which it may refer complaints or evidence of unethical conduct which in its judgment are of greater than local concern. Such investigating juries, if probable cause for action be shown, shall submit formal charges to the President, who shall appoint a prosecutor to prosecute such charges against the accused before the Judicial Council in the name and on behalf of the American Medical Association. The Council may acquit, admonish, suspend or expel the accused."

If and when a physician is found to be unethical by the proper authorities as established through channels specified in the Constitution and By-Laws, and he is still retained on the staff of any hospital approved for resident or intern training by the Council on Medical Education and Hospitals, it shall be the duty of the Judicial Council to request the Council on Medical Education and Hospitals to show cause as to why that Council should not remove such hospital from the approved list under the assumption that the hospital is just as unfit for the training of young physicians for unethical reasons as it is unfit because it may not or does not have proper filing systems for its laboratory or clinical records.

Another matter which the Committee believes pertinent as regards the problem of physician-hospital relationships is the set of principles prepared by the Council on Professional Practice of the American Hospital Association (Robin C. Buerki, M.D., Chairman) and approved in 1946 by the Board of Trustees of the American Hospital Association, the American College of Surgeons, representatives of the various specialty groups (anesthesiology, radiology, and pathology), and the Council on Medical Education and Hospitals of the American Medical Association.

These Principles of Relationship Between Hospitals, Radiologists, Anesthetists and Pathologists emphasize that the primary obligation of both physicians and hospitals is to serve the best interest of the patients. This the Committee believes leads to a fundamental principle that the decision as to the ethical or unethical nature of practice must be based on the ultimate effect for good or ill on the public as a whole. These principles also recognized the basic fact that all of the various questions involved in the relationship between physicians and hospitals, both legal and ethical, must be considered in the first instance at the local level because of the various differences which of necessity exist in the many sections of the country. Again, the Committee believes that this gives us another fundamental principle, that, consonant with established principles of medical ethics, local conditions must decide the various arrangements and conditions of practice in reference to both hospital facilities and medical personnel and their relationships.

One of the factors that have aggravated physician-hospital relationships is the inclusion of medical services in the contracts of voluntary hospital service plans. The medical profession is fostering voluntary health insurance, and we believe that nothing should be done to disturb this very important and essential program. However, the American Medical Association has reaffirmed many times through its then Bureau of Medical Economics, its Judicial Council, and the House of Delegates the principle that hospital service plans should exclude all medical services, and the contract provisions of such plans should be limited exclusively to hospital services. At the same time, so that there would be no misunderstanding as to which services should or should not be included, the House of Delegates has stated that ". . . if hospital service is limited to include only hospital room accommodations, such as bed, board, operating room, medicines, surgical dressings and general nursing care, the distinction between hospital service and medical

service will be clear."* Furthermore, past actions of the House of Delegates give the Committee every reason to reiterate that radiology, anesthesiology, pathology and physiatry constitute the practice of medicine.

In order to initiate a method for remedying this situation, it is recommended that Blue Shield and Blue Cross be requested to cooperate to the extent of writing all new contracts in such a manner that Blue Shield will cover insurable medical services and Blue Cross will cover insurable hospital services. Your Committee believes that the professional and hospital authorities and the voluntary prepayment plans will cooperate in furthering these recommendations.

The Committee believes that since the physician and hospital are interdependent, it is incumbent on both to be interested in all phases of their scientific and financial relationships. This means that the professional staff of the hospital has very definite responsibilities toward not only other members of the professional staff, whether active or courtesy, but also toward hospital management. The recommendations of the staff concerning medical matters are usually accepted by the management of the hospital through its board of managers or trustees. It must also be remembered that to be approved for residencies in specialties by the American Medical Association and the American College of Surgeons, certain requirements are mandatory to the institution, among them adequate pathologic and radiologic coverage. As a rule, the staff of a hospital elects an executive committee or works under an appointed executive committee to advise the lay officers of the institution on purely professional matters, and recommends who may or may not use the institution for professional work. Unfortunately, in many instances, the financial problems of the lay hospital management have been no affair of the staff or of its professional executive committee. This is wrong and probably the cause of most of the differences of opinion between physicians and hospital management. The financial problems of an institution in which a physician does his professional work are definitely of importance to him and to the professional staff, and the proper consideration must be given to these problems if the hospital is to work efficiently and remain the workshop of the physician, and without proper facilities the services rendered to the public are in jeopardy and these public services are the all-important function of both hospital and staff.

Every professional man on the appointed staff should have a voice in the professional management of the institution. The pathologist, roentgenologist, anesthesiologist and physiatrist, as well as the other professional staff members, should have equal standing as active members of the staff with all the rights and privileges pertaining to other members of the staff of equal standing. The chiefs of these departments should be nominated and appointed in the same manner as are the chiefs of other major departments in the same hospital.

The revised Principles of Medical Ethics has been written with all of these various factors in mind and is broad enough to cover all possible ethical physician-hospital relationships. The Constitution and By-Laws of the American Medical Association distinctly covers methods of procedure for all persons who have a complaint so that they may approach the Judicial Council. The functions of that Council are specifically delineated.

For the purpose of activating this report, the Committee has the following suggestions:

> In the event of a controversy between physician and physician, or physician and hospital management, on these problems, it is recommended that, since local conditions must be taken into consideration, these problems be resolved insofar as possible at the local level.
>
> The Committee believes that there can be no exploitation of the doctor or of the hospital if everyone concerned in management and on the professional staff will work together to supply the greatest possible good quality medical and hospital services to the public. In any given controversy, every effort should first be made to settle the matter at the staff-management level. In case of failure to settle the controversy at this level, assistance of the county medical society should be requested. If, then, it cannot be resolved it should be submitted to a committee of the state medical association for advice and recommendation. If problems cannot be solved at the staff-management level, through the county medical society, or through the state medical association, the Constitution and By-Laws of the American Medical Association provides that ". . . the (Judicial) Council may, at its discretion, investigate general professional conditions and all matters pertaining to the relations of physicians to one another and to the public, and make such recommendations to the House of Delegates or the constituent association as it deems necessary."

To implement the settlement of such controversies, it is recommended that each component medical society and each constituent state and territorial medical association appoint a Committee on Hospital and Professional Relations. This committee should be available to receive complaints from any physician, hospital, medical organization, or any other interested person or group with reference to professional or economic relations existing between doctors of medicine and hospitals. On receipt of such complaint by such a committee the matter should be investigated and acted on in such manner as will best effect adjustment of the complaint.

Your Committee has already communicated with every state in the Union requesting that a Committee on Hospital and Professional Relations be created at the state level to assist similar committees at the county society level in solving these disagreements wherever they arise. Many states have already established these committees, and they are functioning.

Another approach that should not be neglected in activating this report is that of the local and state hospital associations. Most of the states and many communities have hospital associations providing direct representation for the hospitals within their areas. It seems reasonable to assume that state medical associations and component county medical societies could well effect liaison with these organizations in the settlement of problems involving physician relationships.

The following principles as additional guides to individual physicians, county medical societies and state medical associations:

1. A physician should not dispose of his professional attainments or services to any hospital, corporation or lay body by whatever name called or however organized under terms or conditions which permit the sale of the services of that physician by such agency for a fee.

2. Where a hospital is not selling the services of a physician, the financial arrangement if any between the hospital and the physician properly may be placed on any mutually satisfactory basis. This refers to the remuneration of a physician for teaching or research or charitable services and employ or otherwise engage doctors for those purposes.

3. The practice of anesthesiology, pathology, physical medicine and radiology are an integral part of the practice of medicine in the same category as the practice of surgery, internal medicine or any other designated field of medicine.

Finally, in order that progress regarding the activation of the report may be followed, the Committee suggests that the House of Delegates authorize this Committee to keep in touch with the Committees on Hospital and Professional Relations appointed by the county medical societies and the state medical associations and report on such progress at the next annual meeting.

ADDENDUM: SUPPLEMENTARY REPORT OF THE COMMITTEE ON HOSPITALS AND THE PRACTICE OF MEDICINE

The Committee believes that if the following pattern were followed the possibility of solving any controversy between physician and hospital would be greatly improved:

When a physician believes he has a legitimate complaint against hospital management, he should first attempt to solve the difficulty at the staff level. And it is incumbent on the medical staff to assist in arriving at a fair and proper solution.

If no solution is reached at this level, the physician should appeal to the appropriate committee of his county medical society for advice and assistance. The county medical society committee should develop methods for contacting hospitals, management and boards, as well as local associations representing hospitals, in order that all sides of the controversy may be understood and personality difficulties minimized.

When a solution seems impossible through the good offices of the county medical society, mechanisms should be available for presentation of the matter to the state medical association

* Proceedings of the San Francisco Session of the House of Delegates, 1938, p. 31.

of which the physician is a member. Here again, for the purpose of receiving all available facts and opinion, the state medical association should develop liaison with the state hospital association.

To facilitate the consideration and mediation of physician-hospital controversies, specific authorization to handle such matters should be given to some committee of both county and state medical societies. In the larger county societies and the state associations this function could be best carried out through a special committee created for just this purpose. It should be the function of such committees to mediate differences in the light of the existing state laws, the Principles of Medical Ethics, and the best interests of the patients.

The services of the Correlating Committee on Extension of Hospitals and Other Facilities of the Council on Medical Service, working with a similar committee of the American Hospital Association, should be available to study and assist in solving physician-hospital problems which seem unsolvable at the local and state levels. For formal opinion or adjudication, however, the portfolio should be presented to the Judicial Council.

(The recommendation of the reference committee that the supplementary report be referred to the Judicial Council was approved by the House of Delegates.)

Report of Reference Committee on Medical Education

During the presentation of the report Dr. William Bates, Vice Speaker, occupied the Chair.

Dr. L. W. Larson, Chairman, presented the following report, which was adopted section by section and as a whole on motions of Dr. Larson duly seconded and carried.

Your reference Committee on Medical Education met and had hearings regarding the various reports and resolutions referred to the committee and wishes to present the following report:

1. Report of the Council on Medical Education and Hospitals Pertaining to the Association of Internes and Medical Students: Your committee agrees with the conclusions reached by the Council and likewise recommends that the American Medical Association "cannot lend its support to the activities of the Association of Internes and Medical Students as presently constituted." Your committee agrees with the Council "that there is need for an independent organization of medical students which will develop policies and activities that are acceptable to the majority of medical students and that if and when such an organization is developed it should have the active support and encouragement of the medical profession."

2. Supplementary Report of the Council on Medical Education and Hospitals Pertaining to a Revision of Certain Sections of the "Essentials of Approved Residencies and Fellowships." Copies of this supplementary report have been distributed to the House of Delegates.

Your committee recommends the approval and adoption of this supplementary report of the Council. It further recommends that all members of the House of Delegates and the medical profession read this report carefully since it incorporates much of the material contained in numerous resolutions which have been presented to the House of Delegates during this session. Your reference committee desires to call specific attention to the following two quotations from the Council's supplementary report:

> "The particular specialties in which residents are being trained should be represented in the staff by well qualified, experienced and proficient physicians, whether or not they hold membership in special societies and colleges or are certified in their specialty.
>
> "It is not essential, or even desirable, that all hospital residencies should adopt exactly the same program, or that they should offer a rigidly uniform sequence of experience. It is essential, however, that all hospitals participating in graduate training should be able to meet the fundamental essential requirements for an approved program and either alone or in collaboration should attain comparable results in the quality of training and amount of experience obtained."

Your committee recommends the adoption of the supplementary report of the Council on Medical Education and Hospitals.

3. Report of the Committee on General Practice: Your committee wishes to express its appreciation of the splendid work of this committee and agrees fully with the statements and ideas presented in the report as published in the Handbook.

4. Resolutions on Manual on the Establishment and Operation of a Department of General Practice in Hospitals: This manual was given due consideration by your committee. Your committee wishes to commend the American Academy of General Practice for the initiative it has shown in preparing this manual and suggests that it be made available to hospitals which are planning to develop general practice sections. Your committee recommends adoption of the resolutions.

5. Resolution on Hospital Staff Meetings: This resolution is disapproved by your committee, because there are no regulations of the Council on Medical Education and Hospitals which make attendance at staff meetings mandatory. Mandatory attendance at hospital staff meetings is a part of the rules for standardization imposed by other accrediting agencies. The rules in individual hospitals with respect to attendance vary greatly. Your committee wishes to call attention to the statement in the "Essentials of Approved Residencies and Fellowships" of the Council on Medical Education and Hospitals which reads: "the staff must hold an adequate number of regularly scheduled clinical pathological conferences and other staff meetings at which the histories, clinical observations, laboratory studies and pathology of selected cases are reviewed." It should be noted that this statement does not specify how often staff meetings should be held.

6. Resolutions on Residency Training in Obstetrics and Gynecology: Your reference committee recommends that the content of these resolutions be referred to the Council on Medical Education and Hospitals for its consideration in the formulation or revision of its standards for residency training in this field which might be made in the future. The committee would emphasize that evaluation of the entire program of residency training is a continuing process in the Council.

7. Resolutions on Inspection and Evaluation of Hospitals: These resolutions consist of three parts: (1) a commendation of the Council on Medical Education and Hospitals for its outstanding efforts and accomplishments in behalf of postgraduate medical education; (2) the appointment of a special advisory committee to "assist in the development and enforcement of policies and procedures which will guarantee to hospitals equitable consideration in future evaluation of their facilities and activities in the training of internes and residents"; (3) a procedure by which hospitals seeking approval for graduate training in medicine shall be given a report of the inspector's findings and recommendations and the action of the Council on Medical Education and Hospitals. It also provides that the hospital which has been denied approval shall be given the right and opportunity for appealing the action of the Council before an appeal board especially created for this purpose.

Your committee believes that this procedure is being followed by the Council on Medical Education and Hospitals except that there is no special board to consider appeals. Therefore your committee does not approve the creation of a special committee for this purpose.

Your committee, however, is in sympathy with the general content of the resolutions and recommends that they be referred to the Council on Medical Education and Hospitals for its information. Your committee has been informed by the Council on Medical Education and Hospitals that the number of applications for approval increased markedly following World War II and the Council did not have a sufficient staff to report in as much detail as it would have liked the results of its inspections. However, the Council is hopeful that its entire program in graduate training will be stabilized within the coming year. It is the opinion of your committee that if this does not occur, due consideration to an increase in the staff of the Council be given by the Board of Trustees.

8. Resolution on Specialty Boards: Your committee does not believe it is feasible to urge the specialty boards to estab-

lish a mandatory requirement that all candidates for certification serve a period of general practice. Your committee is sympathetic with the view that the specialty boards consider giving suitable credit for time spent in general practice. This subject is adequately covered in the report of the Committee on General Practice.

Your committee therefore recommends that this resolution not be approved.

9. Resolution on State Board Examinations in Pediatrics: Your committee is in sympathy with this resolution but recommends that it be reworded as follows:

Resolved, that the House of Delegates of the American Medical Association urges the state medical societies to use their influence with the various state boards to give proportionate consideration to pediatrics as is given to other fields of medicine.

Your committee recommends adoption of this resolution as amended.

10. Resolution on Graduate Training: Your committee recommends the following:

1. That the first section of this resolution reading: "That the Advisory Board for Medical Specialties be instructed to authorize no more new specialty boards without specific approval by this House of Delegates" be disapproved because it covers areas of control which are beyond the jurisdiction of the American Medical Association. Your committee suggests, however, that the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals exercise the greatest discretion before approving any additional specialty boards to avoid an overabundance of specialty boards.

2. That the second section of the resolution which reads: "That the Council on Medical Education and Hospitals be instructed to offer, with adequate publicity in THE JOURNAL, to extend its unified inspection service to include the other specialties concerned in hospital graduate training programs," requires no action since the principle of a unified inspection service has already been initiated by the Council on Medical Education and Hospitals.

3. That the third part of the resolution which reads: "That the American Medical Association, through its Council on Medical Education and Hospitals, take proper steps to insure (*a*) some reasonable and less rigid training programs for graduate education, (*b*) that rigid limitations of practice be abandoned, and (*c*) that properly unified authority through American Medical Association channels be established for general supervision of all specialty boards," be referred to the Council on Medical Education and Hospitals for earnest consideration in conjunction with the Advisory Board for Medical Specialties.

11. Resolution on Specialty Boards: Your reference committee recommends the adoption of the resolution disapproving the practice of certain hospitals making specialty board ratings a requirement for appointment or promotion.

Respectfully submitted,

L. W. LARSON, Chairman.
WILLIAM D. STOVALL,
EDGAR V. ALLEN.
HAROLD B. GARDNER,
ANDREW A. EGGSTON.

The Speaker resumed the Chair.

Announcement from Board of Trustees

RENEWAL OF CONTRACT WITH WHITAKER AND BAXTER

Dr. Louis H. Bauer, Chairman, presented the following announcement:

Mr. Speaker and Members of the House: The Board of Trustees this morning took an action in which I think you will be greatly interested. We have been concerned for some time as to what we should do next year with reference to our educational campaign. We have very great hopes that we can carry on in a very greatly decreased tempo from what we have during the past year. On the other hand, we feel that it would be a great mistake to break up our organization which we have established and which has been so successful, because we don't know what may happen.

Therefore, the Board feels that we should continue our campaign and that it would be a mistake to lose our winning combination of Whitaker & Baxter, so we have retained them, extending their contract for an additional year. As you know, their contract would have expired December 31, 1950. We have extended it one year from that date. The details of this are to be worked out later.

It is our hope that we can carry on, as I say, at a greatly decreased tempo, and that we will spend far less money in the educational campaign next year than we have during the past. On the other hand, we feel that there are two other groups in our own organization which should be expanded. The Council on Medical Service, as I think you all know, has a large number of subcommittees covering the various fields within what you might term the whole practice of medicine, and it is our idea that those committees which are now raring to go should be given the facilities for so doing, and we are asking the Council on Medical Service to submit to us an estimate on their plans for expansion of the activities of that Council through their subcommittees, which will, of course, require consideraable increase in their budget.

Also, our own Department of Public Relations, the one within the American Medical Association itself, has had to take something of a back seat because we have had to concentrate on the National Education Campaign. We feel that at some time which we hope will not be too far distant, when we are through with this educational campaign, we should have an organization within our own headquarters to carry on the public relations of the American Medical Association. So it is our intent to expand that department during the coming year. In other words, we hope to spend a lot less money on the educational campaign but a lot more money on these two other activities, but we felt that it would be a very grave mistake to stop suddenly our activities in the educational campaign field because it might be necessary to expand them very greatly on very short notice, and if we do not have a skeleton organization which is capable of doing that and capable of continuing such activities as are necessary, we could find ourselves as much behind the eight ball as we were a year and a half ago when this thing first hit us.

Report of Reference Committee on Sections and Section Work

Dr. Edward L. Compere, Chairman, presented the following report:

RESOLUTION ON APPROPRIATION FOR EXPENSES OF SECTION DELEGATES IN ATTENDING SESSIONS OF HOUSE OF DELEGATES:

WHEREAS, Members of the American Medical Association are now subject to the payment of dues which are collected by the Association to be used for such purposes as are thought to benefit the American Medical Association and medicine in general; and

WHEREAS, The scientific programs of the various sections of the American Medical Association and other activities of these sections, including their representation in the House of Delegates, are important to the success of the American Medical Association in its various fields of endeavor; and

WHEREAS, The sections have no allocated or appropriated or assigned funds to be used for the purpose of defraying expenses of the duly elected delegates from each section to the annual and clinical sessions of the House of Delegates; and

WHEREAS, The time of each delegate is so much taken up with committee work and the meetings of the House of Delegates that he has little opportunity to attend the scientific meetings; and

WHEREAS, The sections are finding it increasingly difficult to persuade section members who are best qualified to represent them in the House of Delegates to serve as delegates because of the financial hardship occasioned by attending both an annual and a clinical meeting of the House of Delegates; be it therefore

Resolved, That the House of Delegates request the Board of Trustees to appropriate funds to be used to defray the expenses of each section delegate to the annual and clinical sessions of the House of Delegates.

This resolution is offered by the Reference Committee on Sections and Section Work.

RESOLUTION ON ESTABLISHMENT OF NEW SECTION

Your reference committee recommends that this resolution requesting a New Section on Medicine in Industry be referred to the Council on Scientific Assembly for study and recommendations.

RESOLUTION ON CHANGE IN NAME OF SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

This resolution is closely tied in with that intended to establish a new Section on Medicine in Industry, and your reference committee recommends that it be referred to the Council on Scientific Assembly for further study and recommendations.

RESOLUTION ON REQUEST FOR A SECTION ON MILITARY MEDICINE AND SURGERY

This resolution asks that the Council on Scientific Assembly be requested to consider again the establishment of a Section on Military Medicine and Surgery. Your reference committee approves this resolution and recommends its adoption.

In addition, your reference committee recommends that the House of Delegates hereby authorize the Council on Scientific Assembly to provide a minimum of one session of the general assembly or other designated portion of the scientific program to be devoted to the medical and health problems of our national defense and security and that the delegates representing the military departments shall be included on the committee appointed by the Council on Scientific Assembly to arrange this program.

EDWARD L. COMPERE, Chairman.
WILLIS H. HURON.
EVERETT C. FOX.
GEORGE M. FISTER.
ROSCOE H. REEVE.

The resolution requesting an appropriation for section delegates was referred to the Board of Trustees, after discussion by Dr. Allen H. Bunce, Georgia, and the Speaker.

The report of the reference committee on the other resolutions was adopted section by section and as a whole on motions of Dr. Compere, duly seconded and carried.

Opposition to Reorganization Plan No. 27

Dr. Louis H. Bauer, Chairman, Board of Trustees, presented the following statement:

The Association of State and Territorial Health Officers desires to inform the House of Delegates of the American Medical Association of the action taken by that Association in special session assembled in San Francisco, June 28, 1950, of unanimous adoption of a resolution expressing its unalterable opposition to Reorganization Plan No. 27. That organization is already on record against compulsory health insurance.

Report of Reference Committee on Amendments to Constitution and By-Laws

Dr. Walter E. Vest, Chairman, presented the following report:

Your committee met and heard prolonged argument, pro and con, on the various matters referred to it for consideration.

1. Speaker's suggestion for appointment of Interim Committee of the House on amendments to the Constitution and By-Laws: Your committee has given serious consideration to the suggestion of the Speaker that the House of Delegates authorize an Interim Committee of the House of Delegates on Amendments to the Constitution and By-Laws. The authorization of such a committee seems not only desirable but practically imperative. Accordingly, your committee recommends that the House of Delegates authorize the appointment by the Speaker of such an Interim Committee. It is further recommended that the Interim Committee be instructed to consider such matters as may be referred to it by this House of Delegates and also the wisdom of the authorization of a Standing Committee on Amendments to the Constitution and By-Laws and report to the next clinical session of the House.

2. Report of Board of Trustees on Setting Amount of Membership Dues at Annual Session: Your committee has considered that portion of the report of the Board of Trustees referred to it relative to the recommendation that the House of Delegates set the amount of membership dues at the annual session in order to give ample time to state associations for preparation of statements. Your committee deems the recommendation wise and recommends its adoption.

3. Report of Board of Trustees on Remission of Membership Dues: Your committee has also considered the second recommendation of the Board of Trustees that the Board be given specific authority with respect to the remission of membership dues as indicated in paragraph 1 of the item on membership dues in the report of the Board of Trustees. It is the recommendation of your committee that the Board be given specific authority to make such remission.

4. Proposed Amendment to By-Laws: Your committee has given due consideration to the resolution presented by Dr. Britton E. Pickett Sr., Texas, relative to the status of Associate Fellows. Adoption of the resolution is recommended, and the suggestion offered that the first sentence of the second paragraph of Chapter IV, Section 2, paragraph B, of the By-Laws be amended to read: "Associate Fellows shall be privileged to participate in the Scientific Assembly, without the right to vote or to hold office."

5. Resolution on Newly Elected Delegates: Your committee considered the resolution from the Illinois State Medical Society presented by Dr. Charles H. Phifer relative to the date of taking office by the newly elected delegates. This resolution, if adopted, would tend to complicate the working of the House of Delegates. Your committee recommends, therefore, that the resolution be not adopted.

6. Resolutions on American Medical Association Dues, Resolution on Single Membership Classification and Resolution on Single Membership: Your committee considered together the resolutions presented by Dr. W. B. Homan Jr., Texas, relative to including a subscription to The Journal of the American Medical Association in membership dues; the resolution from the Ohio State Medical Association relative to Fellowship and The Journal, and the resolution from the Conference of Presidents and Other Officers of state medical associations relative to the same subject. These were considered together because the contents were essentially the same.

It is the opinion of your committee that subscription to The Journal of the American Medical Association should be included in the membership dues. Accordingly, your committee offers the following resolution:

Resolved, By the House of Delegates of the American Medical Association that Chapter 2, Section 1, Paragraph 1, of the Constitution and By-Laws relating to dues be amended by the addition to the paragraph of the following sentence: "Dues shall include subscription to The Journal of the American Medical Association, such subscription to begin January 1, 1951."

Serious consideration was given to the matter of Fellowship and its implications. While your committee is of the opinion that Fellowship is desirable and probably should be retained, the whole subject has so many ramifications that your committee feels that the question of Fellowship should be referred to the Interim Committee on Amendments to Constitution and By-Laws for prolonged study and report at the next clinical session of the House of Delegates.

7. Proposed Amendment to By-Laws: Your committee considered the resolution presented by Dr. Britton E. Pickett Sr., relative to classification of those eligible for registration. Your committee recommends that Chapter V of the By-Laws, be amended to read as follows:

"Only the following shall be permitted to register at any session:

1. Member or Service Fellows.
2. Active members.
3. Associate, Affiliate or Honorary Fellows.
4. Invited Guests.
5. Medical students of approved medical schools who are certified to the Secretary of the Association by their respective Deans.
6. Interns and residents who are graduates of approved medical schools and who are certified to the secretary of the Association by the superintendents of their respective hospitals."

Respectfully submitted,

WALTER E. VEST, Chairman.
JULIAN P. PRICE.
ALLEN T. STEWART.
CARL A. LINCKE.
THOMAS A. MCGOLDRICK.

The first three sections of the report of the reference committee were adopted on motions of Dr. Vest, duly seconded and carried.

The fourth section of the report of the reference committee was adopted on motion of Dr. Vest, seconded by Dr. A. F. R. Andresen, New York, and carried and the Speaker declared that the adoption of this section constituted an amendment to the By-Laws.

On motion of Dr. Vest, seconded by Dr. Val H. Fuchs, Louisiana, the fifth section of the report of the reference committee was adopted.

Dr. Vest presented the sixth section of the report of the reference committee which the Speaker ruled would have to lie over until the next day because it was a proposed amendment to the By-Laws.

It was moved by Dr. Vest, seconded by Dr. A. F. R. Andresen, New York, and carried after discussion by Dr. E. V. Allen, Section on Experimental Medicine and Therapeutics and the Speaker that the seventh section of the report of the reference committee be adopted and the Speaker declared the By-Laws so amended since this had lain over for 24 hours.

On motion of Dr. Vest, duly seconded and carried the report of the reference committee was adopted as a whole except for the section that must lie over until tomorrow.

Report of Reference Committee on Rules and Order of Business

Dr. J. D. Hamer, Chairman, reported that hearing no objections from the members of this committee, with whom he had not had a chance to meet, concerning the rest of the day the Chairman would like to recommend that this House adjourn at 12:00 o'clock and vote to reassemble at 2:00 o'clock this afternoon, and so moved. The motion was seconded by Dr. Val H. Fuchs, Louisiana, and carried.

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. E. Vincent Askey, Chairman, reported that inadvertently the resolution on Exploitation of Services of the Physician for Financial Profit of the Agency Concerned, which has to do with the same situation as similar resolutions introduced, was left out of the report of the reference committee, that if the name of the resolution is added in the report it will not change or vitiate in any way the report as given, and that it was intended to be included but in dictation or otherwise the name of that resolution was omitted.

Report of Reference Committee on Hygiene and Public Health

Dr. Albert F. R. Andresen, Chairman, presented the following report, which was adopted section by section and as a whole on motions of Dr. Andresen duly seconded and carried:

Your committee carefully considered the two resolutions referred to it and makes the following recommendations:

1. Resolution on Early Detection of Diabetes: This resolution sponsored by the Medical Society of the State of New York, consisting of approval of self-testing for sugar in diabetic detection, is recommended for approval by the House of Delegates.

2. Resolutions on Exfoliative Cytologic Diagnostic Procedure: This resolution, originating with the California delegation, regarding exfoliative cytologic diagnostic procedure was discussed with the proposer, with other proponents of the resolution, with a member of the Board of Trustees and an adviser on public health and, with the approval of all concerned, was rewritten to read as follows:

Whereas, The American Medical Association wishes to promote the diagnosis of cancer in its early stages; and

Whereas, It wishes to support the application of such diagnosis throughout the profession; and

Whereas, It believes that the diagnosis of cancer should be a function of the local private practice of medicine; therefore be it

Resolved, That the American Medical Association endorses the use of all recognized facilities for the initial diagnosis of malignant disease, including the examination of tissues, exudates and bodily excretions. In the case of mass surveys, the American Medical Association believes that this work should be in the hands of qualified private practitioners; and be it further

Resolved, That these surveys be conducted at the local level and under the direction of the county or state medical society.

Respectfully submitted,

ALBERT F. R. ANDRESEN, Chairman.
W. PALMER DEARING.
LOUIS M. ORR.
JAMES Q. GRAVES.
J. MORRISON HUTCHESON.

Report of Reference Committee on Industrial Health

Dr. Patrick J. Sullivan, Chairman, presented the following report, which was adopted on motion of Dr. Sullivan, seconded by Dr. Albert F. R. Andresen, New York, and carried:

Resolution on Medical Relations in Workmen's Compensation: Your reference committee reports favorably on the Resolution on Medical Relations in Workmen's Compensation and recommends its adoption.

Respectfully submitted,

PATRICK J. SULLIVAN, Chairman.
JAMES Z. APPEL.
J. STANLEY KENNEY.
DEERING G. SMITH.

Request for Delay in Putting Into Effect Provisions in Report of Reference Committee on Reports of Board of Trustees and Secretary, Section 14

Dr. Rollo K. Packard, Illinois, moved that putting into effect the section of the report of the Reference Committee on Reports of Board of Trustees and Secretary referring to the Report of the Committee on Hospitals and the Practice of Medicine be delayed for one year. The motion was seconded by Dr. Edward L. Compere, Section on Orthopedic Surgery, and was not carried.

The House recessed at twelve noon to meet at 2 p. m.

Wednesday Afternoon, June 28

The House reconvened at 2:05 p.m., with Speaker F. F. Borzell presiding and declaring a quorum present.

Report of Reference Committee on Legislation and Public Relations

Dr. John W. Cline, Chairman, presented the following report with the exception of that portion of the report on the Coordinating Committee which was presented by Dr. Mather Pfeiffenberger, Illinois, all of which on motions of Dr. Cline or Dr. Pfeiffenberger duly seconded and carried was adopted section by section and as a whole:

The Reference Committee on Legislation and Public Relations had referred to it four resolutions. It considered three of these resolutions and will report on them. It returned one to the Speaker for re-referral to another committee. In addition, the report of the Committee on Legislation, the Coordinating Committee and the report of the Committee on Displaced Physicians in the Report of the Board of Trustees were referred to this reference committee. The committee also considered certain aspects of the field of legislation and public relations and will report on that.

1. Resolution on Income Tax Exemption: The committee agrees heartily with the intent of this resolution. It looks on postgraduate education as an expense incident to the maintenance of one's profession, rather than a capital investment. The committee questions the advisability of committing the Association to requesting the adoption of legislation. Such instructions by the House might impose an undue burden on the Committee on Legislation. It therefore offers a substitute resolution: "Resolved, By the House of Delegates of the American Medical Association that the Legislative Committee be requested to review the situation with reference

to tax exemption for postgraduate education, to the end of introduction of legislation if it deems it wise and feasible."

2. Report of Board of Trustees on Reorganization Plan 27: The committee believes that the American Medical Association should unqualifiedly oppose Reorganization Plan 27 for the same reasons that it opposed Reorganization Plan 1. Reorganization Plan 27 differs only in minor degree from Reorganization Plan 1. The committee therefore recommends the adoption of this report of the Board.

3. Resolutions on Opposition to Certain Senate Bills Before Congress: The committee discussed at considerable length with the legislative committee, delegates and members of the Association, the three bills covered by these resolutions. In reporting the committee's consideration of the House bills to the House of Delegates, the committee desires to present each bill separately:

(1) S. 522 (H. R. 5865). This bill is so designed that it would place local health units in the country under substantially direct and complete control of the Surgeon General of the United States Public Health Service. It further defines public health services as "detection and diagnosis of chronic diseases and such other services concerned with the maintenance, protection or improvement of the public health as the Surgeon General, with approval of the annual conference of the state health authorities, may prescribe." The bill further states that regulations may be made, promulgated, prescribed and administered by the Surgeon General with agreement of the state health authorities, "in so far as practicable." These regulations would have the force of law, although they are not written into the law. The committee believes this to be a dangerous principle which has progressively become more common in recent years, and one which leads to irresponsible and autocratic powers being conferred on appointed officials who may be subject to political pressure.

The committee is strongly of the opinion that the basic services of the departments of public health should be limited to the fields of vital statistics, public health education, environmental sanitation, public health laboratory services, prevention of disease and control of communicable diseases such as the diseases of childhood, venereal diseases and tuberculosis. The committee is of the opinion that under no circumstances and under no guise whatever should public health departments enter into the diagnosis of disease, except for the aforementioned purposes and in the case of indigents, and further that public health departments should undertake no treatment of disease except in the case of indigents, with the exception of venereal disease and tuberculosis in such instances as when the treatment of non-indigents is not available through private sources. The committee therefore recommends that the American Medical Association oppose H. R. 5865 in its present form.

Point 6 of the American Medical Association's Twelve-Point Program states the position of the American Medical Association with relation to the public health services. It is an established fact that there are areas in the country which lack competent health officers and services. The American Medical Association has consistently advocated the improvement of public health services, and reiterates that position.

It is also a fact that one of the reasons that adequate public health services are not available is that public health officers have in many places been woefully underpaid. This fact alone discourages young physicians, who otherwise might be inclined to enter the field of public health. The committee recognizes that this is, and should remain, primarily a local problem, but recommends that the American Medical Association reiterate the action of the House of Delegates in December 1949 that all reasonable steps should be taken to improve the salaries of public health officers to a point where they would be commensurate with the responsibilities of the positions.

The committee is of the opinion that public health services should be supplied and paid for by the political subdivision which they serve. Federal aid to state, county or city health departments should be granted only on local request, local demonstration of need, and only on a temporary basis.

(2) S. 1411. At the Atlantic City session in June 1949, the House of Delegates voted to oppose this bill as long as Section C of the bill was retained. Section C of this bill has not been deleted, and the committee sees no reason for the House of Delegates to reconsider the stand taken one year ago. It therefore recommends that the American Medical Association continue to oppose S. 1411.

(3) The committee discussed the financial problems of private and state supported medical schools with deans of medical schools as well as delegates and members of the Association. The committee has great sympathy with the financial difficulties confronting certain of our schools. From such evidence as the committee had before it, it appeared unlikely that the quality of education in these schools would suffer from lack of federal funds and highly improbable that any school would cease operation because of financial problems. Certain schools have been able to raise substantial sums by appealing to alumni, to the public and to certain industries. Prominent citizens are at the present time engaged in an effort to raise funds for the purpose of aiding medical schools which face financial difficulties. It is hoped that this project will go far in alleviation of the troubles confronting our medical schools.

In December 1949 the House of Delegates took action opposing companion bills S. 1453 and H. R. 5940. The committee is of the opinion that that action should be reiterated at this session.

H. R. 8886, which has been recently introduced, has not been available for study. It contains many of the undesirable features of H. R. 5940. Inasmuch as the committee has not had an opportunity to study the bill, it cannot discuss it in detail. On the basis of the broad general principle established by the Supreme Court in 1942 that the government may regulate that which it subsidizes, the committee believes that any bill providing federal subsidization for medical education will be detrimental to medical education. It is the opinion of the committee that the American Medical Association should continue to oppose legislation subsidizing medical education until and unless a method can be designed which would make ultimate federal control of our medical schools impossible.

4. Report of Coordinating Committee: The reference committee appreciates the time, thought and effort devoted by the Coordinating Committee to the National Education Campaign. It commends the committee for its work and wishes to draw attention to the outstanding contributions of the chairman of the Coordinating Committee, Dr. Elmer Henderson.

The committee further recognizes the great services of Whitaker & Baxter in the direction of the campaign. When this firm was employed by the American Medical Association in January 1949, it faced a task of great magnitude. The situation of medicine at that time was extremely serious. There were many obstacles to be overcome within as well as outside the profession. Whitaker & Baxter have rendered a tremendous service to the Association, and the committee wishes to express the gratitude of the Association for the splendid work they have done under trying circumstances. The committee feels that the American Medical Association has been extremely fortunate in having such competent and effective campaign directors.

The quotations in the latter part of the report describe what has been accomplished by the campaign more eloquently than could be done by the words of this committee.

The committee believes that the House of Delegates should express its gratitude for, and its complete confidence in, the direction of the campaign. It further recommends that the House express its approval of the projected campaign for the future outlined in the report.

5. Report of Committee on Displaced Physicians in Report of Board of Trustees: The committee has reviewed the report of the Committee on Displaced Physicians published in the Handbook.

Two members of the committee appeared before the reference committee and presented an additional recommendation not included in the original report. The additional recommendation is as follows: "(5-A) That the American Medical Association give encouragement and moral support to any medical school, hospital or other appropriate agency that develops adequate plans for the training of displaced physicians in American clinical methods and practice."

Discussion with members of the committee indicates that I. R. O. certification is based on careful investigation, maximum information available and supported by sworn statements. In certain states I. R. O. certification has become adequate evidence of medical qualifications. Twenty-two states, by law or board regulation, refuse to admit foreign graduates to practice. Seventeen states impose certain restrictions. The various licensing bodies operate under different laws and regulations, and each is autonomous. The American Medical Association should not attempt to induce examining boards to seek changes in laws or to alter regulations. The committee is of the opinion that the American Medical Association should recommend consideration of I. R. O. certification as a basis for admission to examination by boards in such jurisdictions as now or may in the future accept foreign graduates without special restrictions.

6. Coordination Committee on Legislation: Your reference committee discussed at great length with members of the Board of Trustees, members of the legislative committee, the Director of the Washington Office, numerous delegates, Fellows of the Association and representatives of state and county medical socictics the operation of the legislative committee. The reference committee desires to call the attention of the House of Delegates to the remarks of Dr. Bauer, Chairman of the Board of Trustees, relative to the efficiency and accomplishments of the legislative committee in the short period of its existence. The committee concurs that great progress in handling legislative matters has been made in the past six months, and offers its heartiest commendation of the activities of the committee. It hopes that these will be increased and expanded.

The committee is of the opinion that, as a general principle, the American Medical Association should not take a position favoring or opposing legislation which does not bear directly on medicine, but is equally strongly of the opinion that it would be unwise for the House to place restrictions on the discretionary powers of the Board of Trustees and legislative committee.

7. The Washington Office: The committee inquired closely into the activities of the Washington Office as an integral part of the legislative committee's activities. The committee believes that the Washington Office has become more effective and more efficient in the handling of legislative problems since the creation of the legislative committee. The committee, however, is of the opinion that there are certain aspects of the operations of the Washington Office which could be materially expanded and improved. It was evident that the legislative committee was cognizant of this need, and the reference committee recommends that the legislative committee and the Board of Trustees take appropriate action to strengthen the Washington Office.

8. Various Aspects of Public Relations: The committee reviewed the Twelve-Point Program of the American Medical Association. It is the opinion of the committee that this program could be augmented and clarified. This, however, is a matter which would require careful study and cannot be done in a brief period of time. The committee therefore recommends that the House of Delegates request that the Board of Trustees appoint a committee of appropriate size to study carefully the Twelve-Point Program with the idea of making changes which may be indicated. The committee further recommends that this be a continuing committee which will advise the Association from time to time concerning appropriate changes in the policy which may be made advisable by altered circumstances.

The committee is strongly of the opinion that no crisis in health or emergency in medical care exists in this country.

Hasty or ill-considered legislation could and probably would result in serious and perhaps irrevocable damage to the health and medical care services provided for our citizens.

The committee is informed that a factual survey of the health needs of the country is now in progress. It is being made by an impartial agency with the cooperation of the American Medical Association. Legislation designed to meet the health needs of our nation would be premature until the information which will be contained in this report has been made available.

Respectfully submitted,

JOHN W. CLINE, Chairman.
MATHER PFEIFFENBERGER.
JOHN J. CURLEY.
HOWARD B. GOODRICH.
ROSS D. WRIGHT.

Report of Committee on Training of Interns

Dr. Joseph F. Londrigan, Chairman, presented the following report, which was adopted on motion of Dr. Londrigan, seconded by Dr. Val H. Fuchs, Louisiana, and carried after discussion by the Speaker and Dr. Londrigan:

The Committee on the Training of Interns, which was authorized by the House of Delegates in June 1949 at Atlantic City, and the appointment of which was delayed until March 29, 1950, held its first meeting during this session.

Your committee was charged with the duty of studying the whole intern problem. It feels that any comprehensive or proper study of the intern problem will require intensive effort, due to the importance of the internship problem to many hospitals, all medical school graduates and the general practice of medicine, and it is not possible for this committee in the time now available even to approach a study of the problem. It, however, recommends the inauguration of a two year rotating internship program covering the main branches of medicine, surgery, obstetrics and gynecology with standards of teaching acceptable to the American Medical Association and the Association of American Medical Colleges. It further recommends that the House of Delegates appoint from its membership a larger committee or commission, two of whom shall be general practitioners.

Respectfully submitted,

JOSEPH F. LONDRIGAN, Chairman.
WILLIAM R. BROOKSHIER.
CHARLES L. SHAFER.
WILLIAM D. STOVALL.
BERNARD KLEIN.

Report of Reference Committee on Emergency Medical Service

W. P. Anderton, Chairman, presented the following report:

Your Reference Committee on Emergency Medical Service has had referred to it three items: The part of the report of the Board of Trustees dealing with the Council on National Emergency Medical Service and two resolutions.

1. Report of Council on National Emergency Medical Service in report of Board of Trustees:

The first item consists of two resolutions presented to you by the Board of Trustees from the Council on National Emergency Medical Service, (a) Resolution on Effective Civil Defense Program and Resolution on Appointment of Medical Advisory Committee to National Security Council, (b) expressions of appreciation, and (c) a report to this House regarding a Resolution on Battle Assignment of Medical Reserve Officers which was referred to the Council on National Emergency Medical Service as a result of the vote of this House last December.

(a) Resolution on Effective Civil Defense Program: Your reference committee recommends the adoption of this resolution with the following addition:

"and therefore be it further

Resolved, That the Secretary of the American Medical Association is hereby requested so to notify the President of the United States of America and the Chairman of the National Security Resources Board and the Secretary of each constituent state association or society."

Resolution on Appointment of Medical Advisory Committee to National Security Council in Report of Council on National Emergency Medical Service:

Since the National Security Council is composed of the President, the Vice President, the Secretary of State, the Secretary of Defense and the Chairman of the National Security Resources Board, your reference committee is of the opinion that this group can be best supported by policy level medical advisory committees to the Secretary of Defense and the Chairman of the National Security Resources Board. Such a committee is functioning at the Secretary of Defense policy formation level, but the Advisory Committee to the National Security Resources Board is not concerned with top level policy determination. Your reference committee feels that the Medical Advisory Committee to the Chairman of the National Security Resources Board should be placed on a top policy level and so recommends in a substitute resolution as follows:

RESOLUTION ON ASSURING ADEQUATE MEDICAL SERVICE ADVICE TO THE NATIONAL SECURITY COUNCIL

WHEREAS, The decisions of the National Security Council will be critically affected by the magnitude, complexity and seriousness of the medical and health problems that will confront the nation in the event of a future war; and

WHEREAS, A medical advisory committee is now functioning in formulation of the policies of the Secretary of Defense; and

WHEREAS, No medical advisory committee is so functioning at the top policy level in the National Security Resources Board; therefore be it

Resolved, That the American Medical Association urge the appointment of a medical advisory committee to function at the top policy level of the Chairman of the National Security Resources Board and that expression of the intent of this resolution be transmitted to the President of the United States and to the Chairman of the National Security Resources Board.

(b) Expressions of Appreciation in Report of Council on National Emergency Medical Service in Report of Board of Trustees:

The expressions of appreciation from this part of the report of the Board of Trustees are divided into three paragraphs:

(1) Appreciation for the wisdom and foresight of the President of the United States in his appointment of the Chairman of the National Security Resources Board.

An expression of appreciation for the leadership and cooperation of the Director and members of the Health Resources Division of the National Security Resources Board. Coupled with this is an assurance of the departments of the American Medical Association to continue to cooperate with the National Security Resources Board in civil defense planning and to render all possible assistance.

(2) Teaching of medical and radiological effects of atomic warfare is progressing toward the community level. This is because the teachers have been and are being taught through the efforts of this same National Security Resources Board, the United States Atomic Energy Commission and the General Services Administration. Our Council on National Emergency Medical Service recognizes this and wisely desires to continue cooperation with these bodies to the fruition of this important project.

(3) Commendation is also expressed for the Secretary of Defense because he has helped toward improvement of the efficiency and economy of uses made of medical personnel and facilities in the armed forces of the nation.

(c) Report on Resolution Referred to Council on National Emergency Medical Service in Report of Board of Trustees:

The Council on National Emergency Medical Service had referred to it a resolution from this House of last December which dealt with the battle assignments of medical reserve officers. This Council has been assured that the medical department of the armed forces has recognized the situation and is giving it consideration in its current planning. The Council recommends no further action by the American Medical Association at this time.

2. Resolution on Council on Federal Medical Services:

Your committee, in considering the resolution introduced by Dr. James C. Sargent, Wisconsin, requesting the establishment of a Council on Federal Medical Services, is favorably impressed with the principles involved. However, due to the evident magnitude and importance of the subject, your reference committee recommends the referral of this resolution to the Board of Trustees for further study. Your reference committee requests that the Board of Trustees make its recommendation concerning this resolution to the House of Delegates at its next meeting.

Resolution on Medical Care of Civilian Employees of Armed Forces:

It is the recommendation of your reference committee that this resolution be referred to the Board of Trustees for consideration.

Respectfully submitted,

W. P. ANDERTON, Chairman.
STEPHEN E. GAVIN.
H. G. HAMER.
EUGENE F. HOFFMAN.
HUGH H. HUSSEY JR.

On motions of Dr. Anderton, duly seconded and carried, the report of the reference committee on the resolutions in the Report of the Board of Trustees on the Report of the Council on National Emergency Medical Service was adopted.

Dr. Anderton moved adoption of Section 1 (b) of the report of the reference committee and the motion was seconded by Dr. James C. Sargent, Wisconsin, and discussed by Dr. John J. Curley, Massachusetts, and Dr. George S. Klump, Pennsylvania, who moved an amendment to delete the expression of appreciation No. 3 in the Report of the Board of Trustees on the Council on National Emergency Medical Service. This amendment was seconded by Dr. John J. Curley, Massachusetts, and carried by a rising vote.

Dr. Anderton then moved adoption of Section 1 (b) as amended and the motion was seconded by Dr. Val H. Fuchs, Louisiana, and carried.

On motions of Dr. Anderton, duly seconded and carried, the balance of the report of the reference committee was adopted section by section, and as a whole as amended.

Report of Reference Committee on Miscellaneous Business

Dr. R. B. Robins, Chairman, presented the following report, which was adopted section by section and as a whole on motions of Dr. Robins, duly seconded and carried:

1. Resolution on Costs of Medical Care: Your reference committee suggests that this resolution be referred to the Board of Trustees for its consideration.

2. Resolutions on Restrictive Membership Provisions: Your committee recommends the adoption of these resolutions. This matter still remains under the control of constituent societies.

3. Resolution on Survey of Practitioners: Your committee recommends that this resolution be referred to the Board of Trustees for transmission to the Bureau of Medical Economic Research.

4. Resolution on Continuation and Expansion of National Education Program: Your committee recommends adoption of this resolution.

5. Resolutions on Endorsement of the World Medical Association: Your committee recommends adoption of these resolutions.

6. Resolution on Establishment of Committee on Alcoholism: Your committee feels that this is a subject which should be studied by the already established Commission on Chronic Illness, and it does not endorse the establishment of a special committee for this purpose.

7. Resolution on Dissemination of Information Designed to Prevent Blindness to Any Nonmedical Group: Your committee recommends adoption of this resolution.

8. Resolution on Multiplicity of Meetings of American Medical Association Councils: Your committee is favorable to this resolution and recommends its adoption.

9. Resolution on Collection of American Medical Association Dues: Your committee has given thorough study to this resolution, but feels that it does not afford a feasible solution of the problem of collection of American Medical Association dues.

Respectfully submitted,

R. B. ROBINS, Chairman.
GEORGE BRAUNLICH.
THOMAS A. FOSTER.
GEORGE W. KOSMAK.
EDWARD H. CARY.

Report of Committee on Veterans Affairs

Dr. B. R. Kirklin, Chairman, presented the following report of the committee signed by four of its members:

Your committee has studied the resolution presented to the House of Delegates by the Tennessee delegation pertaining to the medical and hospital care of veterans with non-service-connected disabilities. To refresh your memory, we quote from the Proceedings of the Washington Session of the House of Delegates:

Resolutions on Medical and Hospital Care of Veterans with Non-Service-Connected Disabilities: Dr. Robert B. Wood, Tennessee, on behalf of the delegations from the States of Tennessee and Texas, presented the following resolutions, which were referred to the Reference Committee on Insurance and Medical Service:

WHEREAS, The present program of medical and hospital benefits for veterans with non-service-connected disabilities is of unequal benefit to veterans and not universally available to all eligible veterans because of the presently limited facilities; and

WHEREAS, The program of expanding the number and size of veterans' hospitals to the point of making these benefits reasonably available and accessible to all veterans, especially in cases of acute illness or injury, would require the construction and administration of a very large number of veterans' hospitals; and

WHEREAS, The principle of insurance has been proved by experience to be applicable to the financing of the cost of medical and hospital care; now therefore be it

Resolved, By the House of Delegates of the American Medical Association that we recommend to the Congress of the United States and to veterans the enactment of legislation which would have the following effects:

1. The repeal of Section 706, Chapter 12, Title 38, of the World War Veterans' Act (Reference — U. S. Code, 1940 Edition) and substitute therefor an amendment with following provisions: (*a*) That the Administrator of Veterans' Affairs be authorized and directed to issue to each veteran eligible to receive such benefits, a medical and hospital service contract with a benefit provision in an amount sufficient to cover the costs of (1) necessary hospitalization in a civilian hospital that is approved for service to veterans by the Veterans Administration, and (2) necessary medical and surgical services rendered in such hospitals on the basis of the fee schedule that applies to veterans with service-connected disabilities; or that the Administrator of Veterans' Affairs be authorized to purchase such a contract from corporations engaged in the sale and administration of such contracts if, in his judgment, it is feasible to do so; (*b*) that such contracts cover all diseases and disabilities which require hospitalization except the following: (1) disabilities covered by compensation laws and public liability, (2) service-connected disabilities, (3) chronic illness (extending over 90 days), (4) tuberculosis and (5) mental illness; (*c*) that veterans with disabilities in the categories mentioned in paragraph (*b*) excepting those covered by compensation laws and public liability, be eligible for admission to Veterans' Hospitals; (*d*) veterans with disabilities which are in dispute as to whether or not they are service-connected, be eligible for admission to Veterans' Hospitals for study, treatment and adjudication and that the disability then be classified for these benefits according to such judgment; (*e*) that the eligibility of a veteran to receive the contract mentioned above be determined on the basis of his or her net income, and that the net income be determined by the same methods used in determining his or her net income for federal income tax purposes; and (*f*) that the veteran be required to file an application for the contract on a form prescribed by the Administrator of Veterans' Affairs, in which the veteran states under oath, the pertinent facts concerning his or her net income; and be it further

Resolved, That the Speaker of the House is authorized and directed to appoint a Committee on Veterans' Affairs of not less than seven Fellows of the Association whose duty it will be to use their best efforts to bring about the actions above set out.

Report of Reference Committee on Insurance Plans and Medical Service: Dr. George S. Klump, Chairman, presented the following report:

"Resolutions on Medical and Hospital Care of Veterans with Non-Service-Connected Disabilities: Your reference committee reminds the House that these resolutions contain the same resolutions, as amended by this House, which were referred to the Board of Trustees in June 1949. Your committee has exhausted all sources of information, including the Chairman of the Council on Medical Service and members of the Board of Trustees, and has been unable to obtain information regarding any action having been taken.

"Your committee agrees that veterans entitled to medical care for non-service-connected disabilities, as defined by the Congress, should be cared for by existing civilian facilities. This is in accord with the report of the Hoover Commission. Your committee feels that regardless of the Veterans Administration hospital construction program it will be impossible to provide hospital care in all communities. However, hospital facilities are available in many communities. Veterans in this category should be allowed to enter local approved hospitals of their choice. Such an arrangement will eliminate inconvenience to the veteran and also continue a high standard of medical care. Your committee believes that the Veterans Administration hospital construction program is in many instances in competition with the federal hospital construction program under the Hill-Burton Act and with civilian hospitals. This may well result in disastrous weakening of our entire hospital system.

"Your committee further believes that veterans should be allowed free choice of physicians. The committee recognizes the extreme importance of this whole problem and its many implications. The committee believes that it is impossible in the short time available to a reference committee to deal judiciously with this problem or to make specific recommendations.

"Your committee therefore recommends that a special committee, under the jurisdiction of the Council on Medical Service, be appointed and activated without further delay; that this committee be instructed to confer with the several veterans' organizations, hospital organizations, the Veterans Administration and other interested groups, with the view toward formulating a program to care for veterans in this category, and that a report be submitted to the House of Delegates at its next Annual Session."

"Respectfully submitted,

GEORGE S. KLUMP, Chairman.
WARDE B. ALLAN.
WYMAN D. BARRETT.
WILLIAM M. COCKRUM.
HOWARD B. GOODRICH.
EDWARD H. McLEAN.
WILLIAM B. RAWLS.
ROLAND W. STAHR."

On motion of Dr. Klump, duly seconded and carried, the report of the reference committee was adopted section by section and as a whole with the exception of the section dealing with Resolutions on Medical and Hospital Care of Veterans with Non-Service-Connected Disabilities.

"Dr. Klump moved adoption of the report of the reference committee referring to the Resolutions on Medical and Hospital Care of Veterans with Non-Service-Connected Disabilities and the motion was seconded by Dr. Albert F. R. Andresen, New York. Dr. H. H. Shoulders, Past President, discussed the matter suggesting that a committee be appointed from the House to report next year with definite recommendations as to what the House stands for on this issue. Dr. William F. Costello moved an amendment" to the report of the reference committee "that the matter be referred to a committee of five members of the House appointed by the Speaker to report at the next session of the House, and the motion was regularly seconded and carried after discussion. This section of the report as amended was then adopted on motion of Dr. Klump, duly seconded and carried.

"The report of the reference committee as a whole as amended was then adopted on motion of Dr. Klump, regularly seconded and carried."

Your committee met in special session in Chicago on Jan. 22, 1950, in order to study the foregoing resolution and the arguments presented to the House of Delegates by Dr. Shoulders and the Tennessee delegation. The American Legion asked permission to attend and to present their opinions regarding this resolution. Mr. T. O. Kraabel, Chairman of the Committee on Rehabilitation of the American Legion and Dr. H. D. Shapiro, medical advisor to the American Legion, appeared and discussed at some length the objections of the American Legion to the principles set forth in the Tennessee resolution. They supported their objections with substantial arguments and it was mutually agreed that there should be more rigid rules for determining the eligibility for admittance to Veterans Administration hospitals for non-service-connected disabilities.

A second meeting of your committee was held in Chicago on March 19, 1950. At this meeting representatives of the American Hospital Association and the Tennessee State Medical Association, Dr. Paul R. Hawley of the American College of Surgeons, former officials of the American Medical Association and others were present. Many arguments, both for and against the resolution, were respectfully heard by your committee. It was agreed by your committee at this meeting that the Chairman should seek further information from experts in this field, as well as from the officers of the Veterans Administration. This was secured and studied by the Committee.

A third and final meeting was held in San Francisco on Tuesday, June 27, at which several members were present and offered arguments both for and against the resolution.

After hearing all arguments for and against the resolution and the proposal therein and after an exhaustive study of all the data, your committee has reached the following conclusions:

1. To recall to your attention the fact that there is already a law in force wherein veterans with non-service-connected disabilities are given hospital and domiciliary care, including medical and surgical treatment while so hospitalized when such veteran (*a*) shows need for such service, (*b*) states that he is unable to defray the necessary expenses therefor, and (*c*) if there is a vacant bed in an existing Veterans Administration Hospital.

2. To remind you that the determination of whether a veteran is unable to defray such expenses has been left solely to a statement signed by said veteran and that there has been misuse of these facilities by those who, by subterfuge or misstatement of fact, have obtained services to which they are not eligible.

3. That the provision for medical and hospital service by this insurance plan, especially if coupled with more stringent standards of eligibility, might be more satisfactory to the veteran and also decrease the necessity for further hospital expansion.

4. That there is not total agreement among those experienced in this type of insurance coverage as to the practicability of the proposed plan.

5. That it would be unwise to place this House of Delegates on record as approving the purchase of insurance for a limited group of citizens—veterans or nonveterans—as this would be class legislation.

The Committee therefore recommends that this resolution be not approved. Your committee wishes, however, to reemphasize the fact that there should be more rigid rules for determining the eligibility for admittance to Veterans Administration hospitals for non-service-connected disabilities and therefore recommends that in order to establish the eligibility of a veteran with non-service-connected disability for hospital, medical and surgical service the veteran should sign on a form prescribed by the Administrator of Veterans Affairs a statement under oath concerning his or her liability for federal income tax.

This report is signed by four of the five members of your committee.

Respectfully submitted,

B. R. Kirklin, Chairman.
William F. Costello.
Charles H. Phifer.
E. Vincent Askey.

Minority Report of Committee on Veterans Affairs

Dr. R. B. Wood, Tennessee, then presented the following minority report signed by himself.

The speaker after study of this proposal before introducing it two years ago, and after becoming a member of the committee just reporting, would like to summarize those reasons leading to the assumption of his present position.

To me there are three groups of people affected by this resolution, the veteran, the medical profession and the tax payer; the first two doing well to remember that they also belong to the last mentioned group. Congress has given first consideration to the veteran. We, in this proposal, are giving it to the veteran of low income groups. Does he stand to win or lose on receiving medical and hospital care close to his own home from a physician of his choice with less expenditure of time and of energy? Will he be more or less happy and will his care be more or less adequate?

The tax payer: Sufficient actuarial figures seem now available to give some idea concerning the cost of the proposed program and to justify the assumption of a decrease from the present method. This is partly affected by the application of the proposed means test that is both painless in nature and definitely equitable, while on the other hand further savings are effected by partly blocking an expansion program that would offer increasing competition to the badly needed hospital program made possible under the Hill-Burton Act.

The medical profession: It is alleged that a threat exists in the form of possible extension of services—under this proposal a choice between a threat and an already existing danger should not be difficult—for in addition to the same possibility of threat, there already exists *the fact* that with each newly erected Veterans Hospital, the approach of a Federal System of Medical Care is just that much nearer a reality.

2,500 medical men today are employed as resident-interns in Veterans Hospitals. Programs of training are inadequate and also unattractive to possible internees without the addition of acute illness—general beds will be a necessity to attract young medical men, and later obstetric and gynecologic and pediatric may also be desirable.

As a member of your committee, I have attended all the meetings of the committee and have considered all the evidence presented for and against the adoption of this resolution.

On the basis of the evidence presented and as a minority member of the committee, I recommend the adoption of the resolution.

Respectfully submitted,

R. B. Wood.

Dr. Kirklin moved adoption of the majority report, which was seconded by Dr. Charles H. Phifer, Illinois, and was discussed by Dr. H. H. Shoulders, Tennessee, who moved that the minority report be substituted for the majority report, which was seconded by Dr. R. B. Wood, Tennessee, discussed by Dr. William D. Stovall, Wisconsin, who moved delay in voting on the matter until the clinical session in December, and this motion was seconded by Dr. H. H. Shoulders, Tennessee. Dr. Stovall then changed his motion so that the matter be laid on the table and the amended motion was seconded by Dr. H. H. Shoulders, Tennessee, and carried.

Announcement of Board of Trustees

Dr. Louis H. Bauer, Chairman, presented the following statement which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

I apologize, Mr. Speaker, for interrupting the routine order, but this is an important matter which must be taken care of this afternoon. The House this morning amended the By-Laws to provide that the dues of membership should include subscriptions to The Journal of the American Medical Association, but they overlooked the fact that Chapter IV, Section 2 (*A*) (1) in the fourth paragraph reads as follows: "A Member Fellow shall pay annual dues not to exceed twelve dollars as may be determined by the Board of Trustees and announced in The Journal of the American Medical Association. Dues shall include subscription to either The Journal of the American Medical Association or any special scien-

tific journal published by the Association." The balance of the paragraph is not material. I will not read that. That would mean that Fellows would be getting THE JOURNAL through two subscriptions, one at $25 and one at $12, which, of course, is manifestly contradictory.

The Board of Trustees therefore recommends that that particular section of the By-Laws be amended to read as follows—before I read it, I would like to make just a little explanation. I think the House decided wisely not to abolish the Fellowship classification. There are certain advantages, one of which is that Fellows are the only ones who can take part in the scientific program although members may attend. Also there is a little distinction between Fellows and members. There are certain members who have never been granted Fellowship, particularly those who have been in some difficulties in one way or another. So I think the continuance of the Fellowship was advisable, but, of course, it would be unreasonable to charge $12 for something which was originally meant to cover subscription to THE JOURNAL. Therefore we recommend this change in the By-Laws:

"Chapter IV, Section 2 (*A*) (1). A Member Fellow shall pay annual dues not to exceed $2, as may be determined by the Board of Trustees and announced in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Member Fellows shall be entitled to elect to receive any special scientific journal published by the American Medical Association in lieu of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, provided in Chapter II, Section 2 of the By-Laws of the Association." The remainder of the paragraph remains unchanged.

The reason I brought it up at this time, Mr. Speaker, is that this will require an amendment to the By-Laws which has to lay over 24 hours, and I believe that the Reference Committee on Amendments to the Constitution and By-Laws would have to make this recommendation today before it can be reported on tomorrow.

Dr. Johnson, Michigan, asked the Chairman of the Board of Trustees to comment on what seemed to be reduction of $12 in the $25 assessment and how much that will impair the educational program that is going forward so well.

Dr. Bauer replied: I am glad that point has been brought up. I neglected to state that if this amendment to the By-Laws is adopted, subscriptions to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION to nonmembers will be raised to $15. Members will receive it as part of their dues, but nonmembers—and we have a large subscription list among nonmembers of the Association—will pay $15.

Of course, this will reduce our income below what it was this past year, but we feel that the amount of money which will be forthcoming on the basis of the amendment which was adopted this morning will be adequate to carry on the activities which we expect to carry out next year. The ordinary activities of the Association without dues would run us about a quarter of a million dollars in the red, so you can see that dues would be necessary in any event regardless of a campaign. In the campaign, we feel next year we shall not have to spend anything like the money we have this year. We feel that we shall have sufficient funds to carry on our activities with this reduction of dues. Another year, we do not know, but for the present it seems that things will be satisfactorily cared for.

The reduction of $12 to $2 is made because the $12 was supposed to cover subscription to THE JOURNAL; until we had membership dues nobody got THE JOURNAL unless he subscribed for it except Fellows who paid the usual subscription fee. Manifestly it would be a little absurd to expect members to pay $25 and receive THE JOURNAL and then expect Fellows to pay an additional $12 for only certain other privileges not associated with the receipt of THE JOURNAL. The Fellows will have the privilege of taking any of the scientific journals other than THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION just as they do now. Members will be restricted to THE JOURNAL itself.

Clinical Session Changed to Cleveland in 1950

Dr. Louis H. Bauer, Chairman, Board of Trustees, announced that the Clinical Session could not be held in Denver as previously planned and the Board of Trustees had decided to have that session in Cleveland, December 5-8.

Report of Reference Committee on Insurance and Medical Service

Dr. Edgar P. McNamee, Chairman, presented the following report:

Your Reference Committee on Insurance and Medical Service received a number of important resolutions and reports. These resolutions and reports were well presented by those interested. Discussion on each was extremely informative. Your commitee, after full consideration of each resolution and report, makes the following recommendations to the House of Delegates:

1. Resolutions on Nursing Profession: The resolutions themselves and the discussion concerning them were considered thoroughly. In various local areas of our country the services of graduate nurses are already included in medical prepayment plans. Your committee is of the opinion that such services could well be expanded to a national level. Your committee recommends the adoption of these resolutions.

2. Resolution on Evaluation of Health Insurance Policies: Such ratings of insurance policies are already in operation in Minnesota. It was the opinion of the committee that such ratings could best be conducted at the state rather than the national level. Your committee recommends that this resolution be not approved.

3. Resolution on Medical Care of Veterans: After due consideration of the resolution and discussion by those who appeared before the committee, and with due consideration also for previous policies adopted by the American Medical Association in reference to this practice, the committee recommends the adoption of this resolution.

4. Report and Supplementary Report of the Council on Medical Service:

The reports present a factual account of the activities of the Council on Medical Service and its several correlating committees during the year 1950. The reports clearly indicate the great activity of the Council and the correlating committees with the many important issues which it has had under consideration. Primarily the reports concern themselves with the progress of the various projects currently being explored. The Council on Medical Service and its correlating committees are to be commended for the good work they have done on new problems which involve the practice of medicine.

Your reference committee suggests that final report on the matters now pending before the Council on Medical Service and its correlating committees be given, if possible, at the next meeting of the House of Delegates.

Your reference committee was impressed, during its consideration of this excellent progress report, with the need for guidance and detailed directions at the local community levels on such matters as are approved of by the Council on Medical Service and its correlating committees.

Your reference committee strongly recommends to the Council that wherever action at the local level is desired, detailed procedural directions be included.

Your committee recommends the approval of this report.

5. Report of the Board of Trustees on the Commission on Chronic Illness: This report was carefully considered by your reference committee which recommends approval of it.

6. Resolution on Twelve Point Program: This resolution was most ably discussed before your reference committee by Dr. James F. Norton and others of New Jersey. The discussion, following the presentation, was lengthy, ample and valuable. Your committee spent considerable time in a detailed study of the resolution and in consideration of the discussion relative to it. Your committee desires to commend highly the members of the Medical Society of New Jersey for their excellent study of this very important subject. It is the opinion of your committee that such studies as this are very desirable and should be encouraged. It was brought out at the committee meetings that such studies are actually in progress in many areas. Many divergent phases of this problem are being experimented with over the nation. It is reasonable to hope that in a comparatively short time the sum total of these various studies will afford the basis for an expanded national program which could meet with the approval of the American Medical Association. Calm and deliberate study is definitely

in order. We should not permit ourselves to be so pressed that we hurry into plans fraught with possible danger.

The need for a plan, or plans, exists. Whether such plans should apply nationally or locally is, at this time, a matter of opinion.

It is the opinion of your reference committee that a satisfactory solution of the problem has not yet been evolved, and although there are many sound principles in the New Jersey plan, there are also so many controversial issues in it that your committee cannot recommend the plan as presented.

The committee recommends that the resolution be not approved.

Respectfully submitted,

EDGAR P. MCNAMEE, Chairman.
JOHN F. BURTON.
RAYMOND W. MCKEOWN.
WARREN L. ALLEE.
ALFRED S. HARTWELL.

Sections 1 to 5 inclusive of the report of the reference committee were adopted on motions of Dr. McNamee, duly seconded and carried.

Dr. McNamee moved adoption of the sixth section of the report of the reference committee and the motion was seconded by Dr. J. B. Lukins, Kentucky, discussed by Dr. James F. Norton, New Jersey, and the Speaker, and carried.

On motion of Dr. McNamee, seconded by Dr. Charles H. Phifer, Illinois, and carried the report of the reference committee was adopted as a whole.

NEW BUSINESS

Resolution on Medical Personnel

Dr. Donald Cass, California, presented the following resolution, which was referred to the Reference Committee on Emergency Medical Service:

Resolved, That the American Medical Association through the Board of Trustees and the Council on National Emergency Medical Service continues to extend the fullest cooperation with the medical services of the Armed Forces and with the National Security Resources Board to the end that the most effective utilization of medical personnel be achieved for the maximum protection of the nation's population.

Announcement of Board of Trustees

Dr. Louis H. Bauer, Chairman, presented the following statement in further clarification of Fellowship dues and subscription to the Association's publications: Mr. Speaker, Dr. Vest just brought up a point which I think perhaps I did not make clear in this proposed amendment to the Constitution and By-Laws. There seems to be some idea that in setting Fellowship dues at $2 as a maximum, the man would then get a special journal for the $2. The By-Laws as amended provide that every member receive THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. We are merely providing in here that a Fellow will have the option of taking either THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION or a special journal under that provision in membership. In other words, if a Fellow decides he would rather have the *Archives of Internal Medicine* than THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, he will get *The Archives* but he will not get THE JOURNAL unless he should subscribe additionally for it. In other words, he will get only one journal, and that is covered in his membership dues. That is why we made the Fellowship dues rather nominal.

The House recessed at 4:10 p. m. to reconvene at 1:00 p. m., Thursday, June 29.

Fourth Meeting—Thursday Afternoon, June 29

The House reconvened at 1:30 p. m., with Speaker F. F. Borzell in the Chair.

Report of Reference Committee on Credentials

Dr. E. P. Flood, Chairman, reported that 193 delegates out of a possible 196 had registered.

Report of Reference Committee on Emergency Medical Service

Dr. W. P. Anderton, Chairman, presented the following report, which was adopted on motion of Dr. Anderton, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried.

Mr. Speaker and Members of the House: Your committee met this morning to consider the resolution introduced yesterday by Dr. Donald Cass of California. Our meeting was attended by a number of members of this House who aided materially in our deliberations. As a result the following substitute resolution is recommended:

WHEREAS, The American Medical Association is aware of the national problems involved in planning for the wisest use of medical manpower in both military and civilian fields; and

WHEREAS, We are mindful of the progress in planning already made by the Armed Forces; and

WHEREAS, The situation in the world today reemphasizes our need for continuing cooperation between the military and civilian members of our profession; there be it

Resolved, That the American Medical Association through the Board of Trustees and the Council on National Emergency Medical Service continue to extend the fullest cooperation with the medical services of the Armed Forces and the National Security Resources Board to the end that the most effective utilization of medical personnel be achieved for the maximum protection of the nation.

Respectfully submitted,

W. P. ANDERTON, Chairman.
STEPHEN E. GAVIN.
H. G. HAMER.
EUGENE F. HOFFMAN.
HUGH H. HUSSEY JR.

Report of Reference Committee on Amendments to Constitution and By-Laws

Dr. Walter E. Vest, Chairman, presented the following report:

1. Proposed Amendment to By-Laws, Division One, Chapter II, Section 2, Paragraph 1: Yesterday your reference committee presented a resolution containing an amendment to the By-Laws, which was required to lie over until the next session of the House before action could be taken. The proposed amendment is as follows: "That Chapter II, Section 2, paragraph 1, be amended by the addition to the paragraph of the following sentence: 'Dues shall include subscription to THE JOURNAL of the American Medical Association, such subscription to begin January 1, 1951.'"

2. Proposed Amendment to Division Two, Chapter IV, Section 2 (A) (1) Paragraph 5:

Your committee has considered the resolution presented by the Board of Trustees relative to the approval of a Fellowship fee. Inasmuch as this cannot become operative until Jan. 1, 1951, and the entire question of Fellowship should be given intensive study, your committee, after consultation with the Chairman of the Board of Trustees, recommends that this resolution be referred to the Interim Committee on Amendments to the Constitution and By-Laws for study and report at the Clinical Session in Cleveland.

Respectfully submitted,

WALTER E. VEST, Chairman.
JULIAN P. PRICE.
ARTHUR C. SCOTT JR.
CARL A. LINCKE.
THOMAS A. MCGOLDRICK,
New York.

Dr. Vest moved adoption of the first section of the report of the reference committee and the motion was seconded by Dr. James F. Norton, New Jersey, and carried after discussion by Dr. G. Henry Mundt, Illinois, and Dr. Vest, and the Speaker declared the By-Laws so amended.

The second section of the report of the reference committee was adopted on motion of Dr. Vest, seconded by Dr. Allen H. Bunce, Georgia, and carried.

On motion of Dr. Vest, seconded by Dr. William Weston, Section on Pediatrics, and carried, the report of the reference committee was adopted as a whole.

(To Be Continued)

WASHINGTON NEWS

The Military Medical Situation

An analysis of the military medical situation indicates that many hundreds of additional physicians will have to be brought into uniform in the next few months, unless the United States can come to a reassuring understanding with Russia. Some of the facts available in Washington are as follows:

1. Top officials considered the three medical services—Army, Navy and Air Force—adequately staffed for peacetime when the Korean crisis occurred.

2. Selective Service has been called on to furnish 20,000 more men for the Army, and Navy, Air Force and Marines have lifted their enlistment ceilings.

3. Present medical personnel cannot be spread far enough to care for the new men.

A yardstick for future medical demands can be devised from the present operational strength of the medical departments. The three services now average 3.6 doctors per 1,000 men. This ratio means 180 additional physicians will be required for each 50,000 men added to the services. In the same proportion, more than 1,000 doctors would be needed for 300,000 more men.

These doctors, it still is hoped in Washington, will come from two sources: (1) reserves who volunteer and (2) men who are under some obligation, if only moral, but who are not in the reserves. At the time fighting broke out in Korea, physicians from private practice and private internships were signing up for active duty at a normal peacetime rate. However, vacancies largely were being filled by men who had completed internships and residencies while on military status. These latter sources cannot be expanded; until and unless compulsion is used, volunteers are the only answer.

Currently doctors of medicine in the three services total 6,000, including men in training and serving internships and residencies. Medical reserve rolls of the three services total around 30,000 men.

Former V-12 and ASTP medical students who have not served on active duty offer one solution to the manpower shortage. (These are men who were deferred from the draft and whose educations were financed in whole or in part by Army and Navy during or immediately after World War II.) During the war years, V-12 and ASTP students automatically went on active duty on completion of their medical courses. Shortly after the end of the war, the government discontinued its financial assistance to those still in school and absolved them from legal responsibility for service.

When shortages of medical personnel became acute in 1948-1949, the services inaugurated a "moral suasion" campaign to induce these young physicians to volunteer for two years of active duty. Defense Department officials sent personal appeals to 11,000 physicians and dentists listed as having received government help in their education but who served no time on active duty. Replies were received from 8,681. A little more than 500 agreed to go into uniform. If a substantial number of the others could be induced to volunteer, this would in large measure satisfy foreseeable military medical requirements.

Another group also is regarded as a possible source of "moral obligation" volunteers. These are the several hundred physicians who immediately after the war received internship and residency training in military institutions but who did not continue on active duty after completion of these terms.

The medical departments apparently were well prepared for the initial impact of the Korean fighting, both as regards professional personnel and beds. On July 1, 385 physicians were in the surplus category, available for assignment to the Far East or to care for any increased patient load in Continental United States. Defense officials say that this "cushion" was made available by the controversial hospital closings and the sharp reduction in the number of VA patients in military hospitals effected several months ago.

On July 1 there were more than 11,000 hospital beds available for the increased patient load. Military hospitals were staffing 37,000 beds, of which 19,000 were occupied by military personnel, 3,000 by military dependents and 3,300 by veterans. Hospitals in operation are capable of enlarging their capacity to the extent of 40,000 mobile beds, but personnel would have to be obtained to staff these extra beds. On the basis of this information, the Medical Advisory Committee to the Secretary of Defense has commended the medical departments for their state of preparedness.

In accordance with established policy, medical students are exempt from the draft. The selective service industrial deferment section (Sec. II-*A*) states that medical students shall not be involuntarily inducted while their academic grades are satisfactory and while their deferment promises to contribute toward the nation's health at some future time. It is up to the local draft boards to decide whether the individual student meets these requirements. Incidentally, a substantial group of medical students were deferred from service in World War II while they pursued educations at their own expense. Defense officials now are looking toward this group for volunteers.

Reorganization Plan Killed

The death of Reorganization Plan *27* in the House was a resounding setback for the Administration and surprising even to some of those working for its defeat. It was generally believed that this proposal, which would make the Federal Security Agency into a Department of Health, Education and Security, would survive the House vote but might be rejected by the Senate. Because rejection by either body is final, no Senate action is now necessary.

Legislatively, the odds were in favor of the plan. Under the law, rejection had to be by a constitutional majority (a majority of all members not just those on the floor at the time) or a total of 218. Because this is an election year, many members take long weekends to campaign at home or remain campaigning for weeks at a time. Furthermore, the vote was scheduled for a Monday, when absenteeism might be expected to be heavy.

Despite these circumstances, the vote in the House was heavy and overwhelmingly in opposition to the plan—*249* to 71, with *2* present but not voting. It was not a party vote. One hundred and six Democrats joined with 143 Republicans to oppose the new department. In general, Southern Democrats were opposed, but so also were a good bloc of northern Democrats who ordinarily support the Administration. So important was the issue considered that scores of members flew back to Washington from their districts for just this one vote.

Two hours of full dress debate preceded the balloting. At one point emotionalism was at such a high pitch that Dr. A. L. Miller, physician-member from Nebraska, reminded his colleagues that men of their age should watch their blood pressure. Most administration speakers concentrated their attacks on the American Medical Association. In general, the other side argued that this proposal was not good government, that it did not promise economies, that it might open the way for socialized medicine and that it did not promise to improve the health of the people.

With Plan *27* disposed of, interest now is centering on bills for aid to medical education (H. R. 8886) and for creation of a United Medical Administration embracing most federal health activities (S. 2008 and H. R. 5182).

Because the Korean situation likely will keep Congress in session for at least another month or so, it is possible that the

off-again-on-again medical education issue will come back into the news. The House Interstate and Foreign Commerce Committee agreed to take up H. R. 8886 on August 8, but at the time of the agreement prospects were for an early adjournment. If Congress stays on, committees will have adequate time to take up other legislation while waiting to handle emergency bills. In that event, aid to medical education undoubtedly will be looked into again, with some possibility that a bill will be reported out. H. R. 8886, incidentally, was introduced only after the committee had pigeonholed a similar bill, H. R. 5940.

On United Medical Administration, the situation is reversed. This legislation will not be passed this session, but committees of both houses are busy listening to scores of witnesses.

Dr. Walter B. Martin, testifying before a subcommittee of the Senate Labor and Public Welfare Committee, said the A. M. A. wants an independent agency or Department of Health but does not favor the arrangement now proposed. He said the A. M. A. particularly objected to removing Veterans Administration medical department from the control of VA. Dr. Martin told the Committee he was convinced that clearing cases through a United Medical Administration would be far more difficult than through VA, as presently handled.

The American Legion's six witnesses entered a mass of testimony into the record, detailing reasons why U. M. A. would be unwise, and they were supported by spokesmen from AMVETS and D. A. V. Carl Gray, head of Veterans Administration, said, "It would be demoralizing to the veterans to take medical and hospital care from under VA, which provides the best medical care in the world." Dr. Charles W. Mayo, who earlier had testified before the House Committee, also was among those who argued against adoption of U. M. A.

Strong arguments in favor of U. M. A. were presented by the Citizens Committee for the Hoover Report and Tracy S. Voorhees, leader of the Hoover Commission Task Force on Medical Care and former Assistant Secretary of the Army. Dr. Hugh Morgan, professor of medicine at Vanderbilt University and wartime chief consultant to the Army Surgeon General's Office, also spoke for the Hoover Committee. He said that under the plan the Army would lose only its general hospitals and that medical officers would receive better training in the one field where their training is most important—the handling of emergency medical and surgery cases.

Mr. Voorhees, testifying before a House committee, said that under U. M. A. veterans could be put in civilian hospitals close to their homes, where there were plenty of empty beds. He pointed out that only 3 per cent of the nation's medical budget went for research and 10 to 11 per cent for preventive medicine. He explained that under U. M. A. these operations could be combined with actual medical care. He said there was a shortage of physicians only in the federal services and that this deficiency could be corrected by referring more veterans to local, private physicians for treatment.

Increase in Federal Health Grants

An FSA statistical report on federal grants for health services shows the middle income states receive the lowest per capita benefits. For the fiscal year 1948-1949, the 16 poorest states received average per capita benefits of 75 cents, the middle group 43 cents and the 16 comparatively wealthy states 48 cents. Included are grants for maternal and child health services, services for crippled children, emergency maternity and infant care, public health services, tuberculosis and venereal disease control, mental health, hospital survey and construction and cancer control.

(In matching grants, the state and local governmental agency is required to pay one third to two thirds of the cost, depending on its income level. Thus the relatively poor income states get federal grants at the least cost to themselves. On the other end of the scale, high income states are better able to raise their own contributions and therefore to participate actively. The middle income states encounter trouble in both directions; their tax revenue does not match that of the top group, and they must pay a higher percentage of costs than the low income group.)

Despite these variations, total federal appropriations for health service grants again are on the increase. Special wartime programs brought the figure from 30 million dollars in 1942-1943 to 60 million the next year. The peak came in 1944-1945—78 million. By 1945-1946, the total had tapered off to 71 million. The decline continued over the next two years to a low of 55 million in 1947-1948. For 1948-1949, it was almost 67 million dollars.

With the hospital-building program (Hill-Burton Act)* in full operation this year, federal spending in the health field is certain to reach another relatively high point.

On this, the FSA report says:

"The higher amounts of federal grants for health, hospital and welfare programs reflect both the growing number of aided functions and the expansion of existing programs.

"Health grants were larger in 1944-1945 than in 1948-1949, however, because of the emergency maternity and infant care program, which reached its peak in the earlier year. Non-emergency health grants have since been broadened to include the functions of mental health, cancer control, hospital survey and planning and hospital construction."

Report on Mental Health

Another report on the national mental health picture, this one covering 1948, shows that facilities, although increasing, are falling still farther behind the demand. The report is entitled Mental Health Statistics for June, published by the National Institute of Mental Health, and covers state institutions which care for 95 per cent of the nonfederal cases. On overcrowding, the report says: "Although the number of beds provided for patients in these hospitals has been constantly increasing, the demand for these beds has most often exceeded the supply. New facilities are filled almost as rapidly as they are completed. As a consequence, in a great number of states, overcrowding is a common phenomenon." Specifically, the number of patients exceeded the rated bed capacity by 18.2 per cent in 1948, an increase of almost 2 per cent over the previous year.

This survey found that there were on the average 3 hospitalized mental patients for each 1,000 population. The interstate variation was striking, from 5.5 per cent in New York to 1.7 in New Mexico. The report says that this is not to be considered a variation in the number of mental patients state by state but a variation in facilities provided.

Accompanying the report are tables giving a comprehensive picture of trends in mental health statistics by states, by age and sex and by all other significant factors. The report is available at the National Institute of Mental Health, Bethesda 14, Md.

Miscellany

Four antihistaminic drugs—thonzylamine, chloroprophenpyridamine, doxylamine and pyrathiazine—were found ineffective for the common cold in an experiment at Great Lakes (Ill.) Naval Training Center. A total of 1,964 persons were used in the study. ". . . There is no significant difference in results when prevention or treatment is undertaken with the drugs studied, inert substances or typical 'cold tablets'." . . . Dr. John G. Gibson II of Harvard has a $10,000 federal grant to continue study of fundamental problems of preservation of blood. He and his collaborators, using radioisotopes, have developed technics for measuring the red cell volume. They recommended a 21 day limit for storage of blood. . . . Dr. George F. Swanson will be manager and professional services chief in the new VA hospital at Beckley, W. Va. . . . Under a new law, VA presumes a service connection for veterans in whom pulmonary tuberculosis develops within three years after discharge; the previous tuberculosis time limit was two years.

MEDICAL NEWS

(Physicians will confer a favor by sending for this department items of news of general interest: such as relate to society activities, new hospitals, education and public health. Programs should be received at least two weeks before the date of meeting.)

COLORADO

Dr. Jensen Goes to New York.—Dr. Frode Jensen, associate professor of medicine and director of graduate and postgraduate medical education at the University of Colorado School of Medicine, Denver, has resigned effective August 1. He will enter private practice in the field of internal medicine in New York City and join the faculty of the Postgraduate Medical School of New York University-Bellevue Medical Center. On June 13 the University of Colorado and members of the medical profession in the state honored Dr. Jensen at a dinner in recognition of his contribution to graduate and postgraduate medical education in Colorado.

Gold-Headed Cane Ceremony.—Dr. Robert S. Liggett, associate professor of medicine at the University of Colorado School of Medicine, Denver, received the gold-headed cane at the annual awards convocation May 26 from Dr. John G. Ryan, Denver, previous holder of the award. The student gold-headed cane for promise as a physician was presented to Kenneth A. Platt, senior. Dr. Liggett is a graduate of Washington University School of Medicine, St. Louis (1933). He is a member of the staffs of Colorado General, Children's, Mercy, Presbyterian and St. Joseph's hospitals.

CONNECTICUT

Yale Laboratory for Cancer Research.—Construction is to begin immediately on a $350,000 laboratory for cancer research at Yale University, New Haven. The building was made possible by a combination of a $250,000 grant from the U. S. Public Health Service, funds from private donors and land given by the Grace-New Haven Community Hospital. The building will be two stories high and will lead directly into corridors serving pathology, bacteriology, surgery, medicine and obstetrics and gynecology.

Institute Acquires Norman Library.—The Norman Library of Psychiatric Literature has been acquired by the Institute of Living at Hartford. It is made up of 350 rare books which mirror the turbulent events of the eighteenth and early nineteenth centuries. The collection was amassed by the late Dr. Hubert Norman, British psychiatrist, who was superintendent of Camberwell House in London and a vice president of the Royal Society of Medicine. Members of the medical profession, scholars and other qualified persons may use the facilities of the library.

DISTRICT OF COLUMBIA

New Registry of Leprosy.—The Leonard Wood Memorial (American Leprosy Foundation) is sponsoring a new Registry of Leprosy at the American Registry of Pathology, a department of the Armed Forces Institute of Pathology, Washington, D. C., under the auspices of the National Research Council. The purpose of this registry is to promote the study of the pathology of leprosy based on material contributed from pathologists throughout the world. The Leonard Wood Memorial and the Armed Forces Institute of Pathology will shortly appoint a Committee of Consultants to the new registry. They will assist in the study as a whole and will be available for consultation on individual cases, which will be initially reviewed in the Armed Forces Institute of Pathology. Contributors should forward not only pathologic specimens in the form of slides, blocks or fixed tissues but also complete identification of the patient to facilitate follow-up studies and an adequate abstract of the clinical data, including details of therapy. Clinical photographs, especially of the individual lesion excised for study, are desired for clinicopathologic correlation. Communications should be addressed to the Director, Armed Forces Institute of Pathology (Attn: American Registry of Pathology), Washington 25.

ILLINOIS

State Medical Election.—Physicians serving as officers of the Illinois State Medical Society for the year 1950-1951 include Drs. Harry M. Hedge, Chicago, president; C. Paul White, Kewanee, president-elect, and Harold M. Camp, Monmouth, secretary-treasurer.

Personal.—Miss Ann Fox, secretary, Educational Committee, Illinois State Medical Society, won first prize for a published article in "newspaper or magazine" of the National Federation of Women's Press Association, at its meeting in Reno, Nev., June 8-10. The prize was won for the Health Talk "Try Laughing," one in a weekly series issued to the press of Illinois by the committee. Miss Fox had previously been awarded the state prize.

Clinics for the Handicapped.—A record number of 1,091 physically handicapped children were examined in clinics conducted during May by the University of Illinois Division of Services for Crippled Children. The previous high attendance figure for any one month was 995 in January of this year. The 17 general clinics conducted throughout the state last month provided orthopedic, pediatric, speech and hearing examinations to 1,021 children, an average of 60 per clinic. Four clinics for children with rheumatic fever had an average attendance of 13, with one cerebral palsy clinic providing services for 17. New cases at the clinics totaled 232. The one day clinics are conducted by the division in cooperation with local medical and health organizations and groups, hospitals and civic and fraternal organizations.

Chicago

Society News.—The following officers were elected to serve the Chicago Psychoanalytic Society for 1950-1951: Drs. Roy R. Grinker, president; Hugh T. Carmichael, vice president; Lucia E. Tower, secretary, and Louis B. Shapiro, treasurer.

Medical School Appointment.—Dr. Solomon C. Werch has been appointed to the faculty of the Chicago Medical School as assistant professor of medicine, director of the dispensary and director of teaching of the residents and interns at Mount Sinai Hospital, affiliated with the school. A graduate of the University of Illinois College of Medicine, 1934, Dr. Werch has previously been on the faculty of Trinity College in Dublin, Ireland, the Medical College of the State of South Carolina and Northwestern University. He was recently head of the department of medicine of one of the University of Colorado College of Medicine's teaching hospitals.

KANSAS

Research in Tularemia.—The University of Kansas at Lawrence has received a grant of $30,000 from the Army Chemical Corps to support research in tularemia. The fund will be used in the departments of bacteriology, biochemistry and entomology, under the supervision of Cora Downs, Ph.D.

Personals.—Dr. James D. Colt of Manhattan, in June was elected president of the Kansas State Board of Medical Registration and Examination. Dr. Oscar W. Davidson, Kansas City, was chosen secretary. Dr. Davidson was elected to fill the vacancy created on the death of Dr. John F. Hassig of Kansas City, secretary of the board for many years.——Dr. Seth L. Cox, Topeka, has resigned as executive secretary of the Kansas Tuberculosis and Health Association after 30 years' service.

KENTUCKY

Station Wagon Presented to Cancer Society. — The Woman's Auxiliary of the Kentucky State Medical Association has presented the Kentucky Division of the American Cancer Society with a new station wagon, which will be used to reduce the cost of transporting physicians and technical staff of the mobile cancer clinic. The keys to the wagon were turned over to Dr. Guy Aud, Louisville, regional director of the American Cancer Society, by Mrs. E. W. Jackson, Paducah, president of the auxiliary, in a ceremony at the health center.

Rural Scholarship Fund.—A dinner meeting of the Rural Kentucky Medical Scholarship Fund was held at the Pendennis Club, Louisville, June 8 in honor of the June graduates receiving loans. The fund, which started four years ago to render financial assistance to medical students to practice later in rural areas of the state, now has four doctors located in small Kentucky communities, two who will be ready to begin practice about September 1 and seven, including the four June graduates,

interning at hospitals throughout the United States. Dr. Carl C. Howard, Glasgow, has been chairman of the board of trustees of the fund since its beginning.

Personals.—The members of the 1950 Curative Workshop Medical Advisory Committee of the Kentucky Society for Crippled Children appointed by the Jefferson County Medical Society are: Drs. Charles J. Armstrong, Gordon S. Buttorff, William M. Ewing, Kenton D. Leatherman and Margaret A. Limper, all of Louisville. Dr. Ewing serves as chairman.——At the graduation exercises of the University of Louisville on June 12, a plaque for 25 years of service to the university was presented to Dr. J. Murray Kinsman, dean of the School of Medicine.

LOUISIANA

Leaves of Absence.—Leaves of absence to conduct research projects in their respective specialties have been granted to Dr. Bertha R. Noble and Paul C. Beaver, Ph.D., of the Tulane University of Louisiana School of Medicine, New Orleans. Dr. Noble, assistant professor of clinical ophthalmology, will study the eye involvement of patients affected by onchocerciasis in Venezuela, at the invitation of the Pan American Sanitary Bureau. Dr. Beaver, associate professor of parasitology, will participate in a study of the relationship between nutrition and immunity to hookworm infection under the auspices of the Georgia State Department of Health.

University Promotions.—Tulane University of Louisiana School of Medicine, New Orleans, has announced the following promotions: Dr. Conrad G. Collins, professor and head of the department of gynecology and associate professor of obstetrics, has been promoted to chairman of the newly combined department of obstetrics and gynecology. Dr. Edward L. King, professor and head of the department of obstetrics, retired July 1 after 37 years as a medical teacher. He became an emeritus professor of obstetrics at Tulane and will continue his private practice in New Orleans. Dr. Joseph N. Ane, acting head of the department of radiology, has been made chairman of the department. Dr. Isador Dyer, associate professor of obstetrics, and Dr. Lewis Thomas, associate professor of medicine, have been promoted to professors.

MARYLAND

Auxiliary's First Annual Meeting.—The Woman's Auxiliary of the Medical Chirurgical Faculty of the State of Maryland held its first annual meeting in Baltimore April 25-26. Approximately 150 registered. Mrs. Thomas A. Christensen, College Park, is president of the state auxiliary.

MICHIGAN

Wins A. A. U. W. Award.—Elizabeth C. Crosby, Sc.D., professor of anatomy at the University of Michigan Medical School, Ann Arbor, is this year's recipient of the American Association of University Women's annual $2,500 achievement award. Dr. Crosby was cited for her accomplishments in the field of neuroanatomy, particularly her recent studies of the midbrain and cerebral cortex in the primates. She will use the award to further her research work. Dr. Crosby's colleagues at the university selected her as the Henry Russell lecturer in 1946, the only time in the history of the school the honor has been bestowed on a woman.

MINNESOTA

Pasteurization Law in Effect.—The sale of raw milk in the state legally ended July 1 except for small quantities for home use purchased at the source of production. Hitherto, only local pasteurization ordinances have been in effect in about 30 communities in the state, although pasteurized milk has been available in additional communities. The compulsory pasteurization law was passed by the 1949 legislature, and its administration is in the hands of the State Department of Agriculture, Dairy and Food. Cream and other milk products must also meet the requirements of pasteurization. Persons offering for sale milk products that fail to meet the legal standards will be guilty of a misdemeanor and subject to fine or suspension or revocation of permit.

Interdepartmental Committee on Mental Health.—Governor Youngdahl has appointed an interdepartmental committee on mental health with Dr. Ralph H. Rossen, Minneapolis, commissioner of mental health, chairman. The committee will coordinate mental health activities of the various agencies relating to prevention, treatment, education and other services, serving as a planning unit and a clearing body. The committee will not assume any of the operating functions of the agencies involved. Development of mental hygiene programs in schools and teacher-training centers is among the activities which the interdepartmental committee will encourage and coordinate. Among other functions suggested by the governor are: provision for recruitment, training and education of personnel for psychiatric work; development and coordination of clinics, psychiatric awards in general hospitals and child guidance activities; encouragement of local level community mental hygiene resources; coordination of relationships between state agencies and appropriate public and voluntary agencies and professions, and development of research programs. In addition to Dr. Rossen, the members of the committee are Dr. Albert J. Chesley, secretary and executive officer, Minnesota Department of Health; Jarle Leirfallom, director, Division of Social Welfare; Dean M. Schweickhard, Ed.D., commissioner, Minnesota Department of Education; Carl H. Jackson, director, Division of Public Institutions, and A. Whittier Day, director, Minnesota Youth Conservation Commission.

NEW YORK

State Medical Election.—The Medical Society of the State of New York recently installed Dr. Carlton E. Wertz, Buffalo, as president and elected Dr. J. Stanley Kenney, New York, president-elect; Dr. Charles D. Post, Syracuse, vice president; Dr. Walter P. Anderton, New York, secretary, and Dr. Maurice J. Dattelbaum, Brooklyn, treasurer.

Medical School Promotions.—Dr. A. Wilmot Jacobsen, a member of the University of Buffalo School of Medicine staff since 1926, has been promoted from associate professor to clinical professor of pediatrics at the school. He is a graduate of Johns Hopkins University School of Medicine, Baltimore (1923). Dr. Donald R. McKay has been promoted from assistant professor of medicine to associate clinical professor. A graduate of the University of Toronto Faculty of Medicine (1925), he became an assistant professor of medicine at the Medical School in 1933. Dr. Elmer Friedland, who has been an associate in medicine, was made a clinical professor of medicine. He graduated from the University of Buffalo School of Medicine in 1932 and has been with the university since.

New York City

Hospital Staff Honors Dr. Tolle.—The Medical Board of Willard Parker Hospital, hospital department officials and friends honored Dr. Dora M. Tolle June 23 at an official ceremony in the office of Dr. Marcus D. Kogel, commissioner of hospitals. Public announcement was made at the time of Dr. Tolle's retirement on July 1 as medical superintendent of the city's Willard Parker Hospital for communicable diseases. Dr. Tolle has been associated with the hospital for 31 years and has been medical superintendent since 1930.

Endow Department of Obstetrics and Gynecology.—New York Medical College, Flower-Fifth Avenue Hospitals, in June received an endowment of $250,000 from the William Nelson Cromwell estate. The college board of trustees has designated this sum as a special endowment for the department of obstetrics and gynecology. The income will be used to partially cover cost of medical education in this field. Dr. Leon S. Loizeaux is director of the department.

Postgraduate Training in Cancer.—Four of New York's leading medical institutions announced June 21 the beginning of a cooperative program designed to provide postgraduate training in the field of cancer and allied diseases. The institutions participating are Cornell University, the Sloan Kettering Institute for Cancer Research, Memorial Center for Cancer and Allied Diseases and the Society of the New York Hospital. Under the program Cornell will establish a new division of its medical college devoted primarily to investigative work in cancer and allied diseases. This new division, to be known as the Sloan-Kettering Division of Cornell University Medical College, will be located in special facilities and constructed, equipped and owned by Memorial Center. The operating funds and personnel will be supplied mainly by the Sloan-Kettering Institute. Dr. Cornelius P. Rhoads, director of Memorial Center for Cancer and Allied Diseases and of the Sloan-Kettering Institute for Cancer Research, will direct the new division. Dr. Joseph C. Hinsey, dean of Cornell University Medical College, will integrate the work of this special graduate division with that of Cornell's Graduate School and all units of the university. The participating institutions will appoint members to a coordinating board that will act as a clearing house for information and will make recommendations. The new division will use the staff and facilities of Sloan-Kettering for the training and education of candidates for advanced degrees in recognized divisions of the physical and biologic sciences. Cornell University and New York Hospital have agreed to make available to the new division such educational and other facilities as in their judgment may be required to complement the instruction.

OKLAHOMA

State Medical Election.—At the annual meeting in June the Oklahoma State Medical Association elected Dr. Ralph A. McGill, Tulsa, president; L. Chester McHenry, Oklahoma City, president-elect and Malcolm E. Phelps, El Reno, vice president. James Stevenson, Tulsa, was reelected delegate to the American Medical Association with Dr. Maurice J. Searle, Tulsa, as alternate.

SOUTH CAROLINA

Dr. Cuttino Named Acting Dean.—Dr. John T. Cuttino, associate in pathology at Duke University School of Medicine, Durham, has been appointed acting dean of the School of Medicine at the Medical College of the State of South Carolina, Charleston, effective July 1. He will also be an associate professor of pathology. Dr. Cuttino is a graduate of the Medical College (1936). At Duke University he has been in charge of the hospital tumor clinic and chairman of the undergraduate cancer teaching program.

SOUTH DAKOTA

State Medical Election.—Officers of the South Dakota State Medical Association for the year 1950-1951 include Drs. Louis J. Pankow, Sioux Falls, president; David A. Gregory, Milbank, president-elect; Roy E. Jernstrom, Rapid City, vice president, and Roland G. Mayer, Aberdeen, secretary-treasurer.

Midwest Medical School Administrators Meeting.—Representatives of midwest medical schools met in Deadwood July 13-14 for their second annual meeting to discuss problems of the administration of medical schools. States which were to be represented at the conclave include Iowa, Missouri, Kansas, Nebraska, Colorado, Oklahoma, North Dakota and South Dakota. Utah, which was represented last year, did not have a representative this year as the state was holding a medical meeting at the same time. The University of South Dakota School of Medical Sciences, Vermillion, inaugurated the meeting of deans and representatives last year at Deadwood. Dr. Donald H. Slaughter, dean was general chairman.

GENERAL

International Society of Angiology Meeting.—The first meeting of the recently founded International Society of Angiology will be held in Paris, September 4-5, at the Collège de France, Place Berthelot. The officers of this society are Dr. René Leriche, Paris, president; Dr. Emile F. Holman, San Francisco, Dr. Alexander M. Boyd, Manchester, England, and Dr. Fernando Martorell, Barcelona, vice presidents, and Dr. Henry Haimovici, New York, secretary. Correspondence regarding the society and its first meeting should be addressed to Dr. Henry Haimovici, Secretary, 1148 Fifth Avenue, New York 28.

Society Elections.—The American Heart Association at its annual meeting in San Francisco in late June installed Dr. Howard B. Sprague, Boston, as president and chose Dr. Louis N. Katz, Chicago, president-elect; Dr. Maurice B. Visscher, Minneapolis, vice president, and Grant Keehn, New York, treasurer. The association reported that it had collected $4,000,000 in its 1950 campaign and had allocated more than $1,000,000 up to this time. It is expanding its program of research.——At the recent meeting of the Association for Physical and Mental Rehabilitation Mr. George V. Devins, Tarzana, Calif., was elected president; Mr. Louis M. Frazier Jr., Memphis, Tenn., secretary, and Mr. Richard G. Fowler, Los Angeles, treasurer. The site of the 1951 convention will be Los Angeles.

Dr. Delatour to Direct American Hospital of Paris.—Dr. Beeckman J. Delatour, associate professor of medicine at New York University since 1944, assumed the duties on July 1 of clinical director and director of medical service at the American Hospital of Paris, which is now fully restored for meeting civilian needs. Dr. Delatour, a graduate of Amherst College and the Johns Hopkins School of Medicine (1915), has studied in Paris and in other sections of Europe. A specialist in internal medicine, he has held appointments as chief of the medical clinic at St. Luke's Hospital and as attending physician at Bellevue Hospital, both in New York. The American Hospital of Paris is located in suburban Neuilly-sur-Seine, and its services are available to any American citizen requiring care, regardless of ability to pay. Foreign paying patients are cared for when private room facilities permit. The million dollar plant now occupied by the hospital was completed in 1926 as a memorial to men and women who served in World War I. Today the hospital has 153 beds and 20 bassinets and an outpatient service. A limited number of appointments to residency and internship are made by the Advisory Board in America.

Prevalence of Poliomyelitis.—Reports of cases of poliomyelitis for the periods indicated have been received from the National Office of Vital Statistics, U. S. Public Health Service:

	Week Ended		Total*		Five Year Median
	July 8, 1950	July 9, 1949	1950	1949	1945-1949
United States Total	478	683	2,529	2,954	1,636
Northeastern States:					
Maine	2	10	4	21	3
New Hampshire	...	1	1	1	1
Vermont	1	...	2	1	1
Massachusetts	3	8	11	50	5
Rhode Island	1	1	2	2	1
Connecticut	1	4	9	12	7
Middle Atlantic States:					
New York	29	16	119	64	64
New Jersey	16	2	51	35	27
Pennsylvania	6	6	37	25	20
East North Central States:					
Ohio	7	12	28	25	32
Indiana	...	24	14	45	15
Illinois	19	19	59	58	28
Michigan	8	10	55	42	14
Wisconsin	6	10	21	24	4
West North Central States:					
Minnesota	7	28	20	16	14
Iowa	12	6	55	27	26
Missouri	1	17	33	47	15
North Dakota	1	5	1	26	3
South Dakota	1	2	7	21	3
Nebraska	13	6	43	21	20
Kansas	9	25	26	47	23
South Atlantic States:					
Delaware	...	...	2	8	2
Maryland	...	...	4	5	5
District of Columbia	5	...	12	3	3
Virginia	22	4	41	11	11
West Virginia	5	4	27	21	5
North Carolina	4	5	33	25	30
South Carolina	31	5	83	15	15
Georgia	9	7	17	25	25
Florida	8	6	61	57	50
East South Central States:					
Kentucky	9	13	43	34	18
Tennessee	13	21	38	54	25
Alabama	30	10	51	62	58
Mississippi	8	13	65	67	16
West South Central States:					
Arkansas	13	70	50	216	22
Louisiana	6	6	54	37	33
Oklahoma	26	74	100	264	40
Texas	105	121	807	836	300
Mountain States:					
Montana	1	...	3	7	5
Idaho	1	14	17	53	3
Wyoming	...	...	8	7	1
Colorado	...	10	21	26	11
New Mexico	3	5	15	24	7
Arizona	...	2	29	12	8
Utah	2	1	8	37	8
Nevada	...	...	1	2	.....
Pacific States:					
Washington	4	5	10	31	24
Oregon	6	5	20	34	4
California	34	58	271	256	228

* Beginning with the 12th week of each year.

DEATHS IN FOREIGN COUNTRIES

Dr. Walter W. Chipman, a founder and former president of the American College of Surgeons, emeritus professor of obstetrics and gynecology since 1931 at the McGill University Faculty of Medicine, Montreal, and member of the staff of the Royal Victoria Hospital, died at his home in Montreal April 4, aged 84.

Marriages

JOHN FRANKLIN LYNCH Jr., High Point, N. C., to Miss Mary Elizabeth Simmons of Rocky Mount, May 12.

HAROLD LACY GODWIN, Fayetteville, N. C., to Miss Nina Prescott of North Dartmouth, Mass., May 20.

JACK RUSSELL HARNES, New York, to Miss Joan Farr Tomick of Great Neck, N. Y., April 22.

BRUCE PETER BERNSTEIN, Jamaica, N. Y., to Miss Selma Nancy Weiss in New York, June 29.

JOHN PAGE WILSON, Augusta, Ga., to Miss Ruth Whitley Parish of Wendall, N. C., June 3.

WILLIAM HOWARD AMES, Cincinnati, to Dr. MARY CAROLYN BEYER of Astoria, Ore., June 14.

JOHN ANTON ADAMSON JR., Baltimore, to Miss K. La Vonne Wertz in Los Angeles, May 27.

DEATHS

Lockwood, John Salem ● New York; born in Shanghai, China, Oct. 2, 1907; Harvard Medical School, Boston, 1931; since 1946 professor of surgery at Columbia University College of Physicians and Surgeons; instructor in surgery and fellow in surgical research from 1937 to 1939 at the University of Pennsylvania School of Medicine, Philadelphia, where he was assistant professor of surgical research and acting director of the department of surgical research from 1942 to 1944, when he became associate professor of surgery at Yale University School of Medicine in New Haven, Conn.; certified by the National Board of Medical Examiners; specialist certified by the American Board of Surgery; member of the American Society for Clinical Investigation, American Surgical Association, Society of Clinical Surgery and Society of University Surgeons; beginning in 1942 he was consultant to the Secretary of War; chief, division of surgery, Committee on Medical Research, Office of Scientific Research and Development, Washington, D. C., from 1944 to 1946; served as a member of the Committee on Surgery and Committee on Chemotherapy, National Research Council, and surgery study section, National Advisory Health Council, U. S. Public Health Service, Washington, D. C.; attending surgeon at Presbyterian Hospital; formerly on the staffs of the Hospital of the University of Pennsylvania, Pennsylvania Hospital and the New Haven (Conn.) Hospital; recently appointed clinical director and chief of surgical services at Memorial Hospital and was to have taken up his new duties July 1; died in Harkness Pavilion of the Columbia-Presbyterian Medical Center June 16, aged 42.

Collins, Joseph, New York; born Sept. 22, 1866, in Brookfield, Conn., University of the City of New York Medical Department, New York, 1888; member of the American Medical Association and the Association of American Physicians; past president of the American Neurological Association and the New York Neurological Society; in 1897 received the Alvarenga Prize from the College of Physicians of Philadelphia; formerly professor of nervous and mental diseases at the New York Post Graduate Medical School; served on the staffs of the Hospital for Special Surgery and Manhattan State Hospital; affiliated with the Neurological Institute of New York, of which he was a founder; author of "The Doctor Looks at Biography," "The Doctor Looks at Literature," "Taking the Literary Pulse," "The Doctor Looks at Love and Life," "The Doctor Looks at Marriage and Medicine," "Insomnia: How to Combat It," "Neurological Clinics," "Sleep and the Sleepless," "Treatment of Diseases of the Nervous System" and others; died June 11, aged 84, of Laennec's cirrhosis.

Daley, Robert Morris ● New York; born in Chatham, N. Y., in 1874; Columbia University College of Physicians and Surgeons, New York, 1896; clinical assistant in nervous diseases at the Cornell University Medical College, 1899-1900; veteran of the Spanish-American War; a captain and assistant surgeon for the Sixty-ninth New York National Guard, 1899-1900; president of the Association of Life Insurance Medical Directors from 1928 to 1930; joined the Equitable Life Assurance Society of the United States in 1911 as an assistant medical director, in 1916 was made an associate medical director and from 1936 to 1947 was medical director; served as treasurer of the Bellevue Alumni Association; in 1941 at the American Medical Association meeting in Cleveland received honorable mention for an exhibit on the clinical evaluation of heart size and measurements; died June 3, aged 75, of arteriosclerosis.

Johnson, William D., ● Batavia, N. Y.; born in Le Roy, N. Y. in June 1869; Syracuse University College of Medicine, 1892; member of the House of Delegates of the American Medical Association in 1912 and 1913 and from 1933 to 1944; fellow of the American College of Surgeons; past president of the Medical Society of the State of New York; served on the state industrial council; chief of staff, St. Jerome's Hospital; surgeon at the Medina Memorial Hospital in Batavia, Arnold Gregory Memorial Hospital in Albion and Craig Colony in Sonyea and consulting surgeon at Mercy Hospital in Buffalo and the Veterans Administration Hospital; died June 1, aged 80.

Johnston, George Coffin ● Orlando, Fla.; born in New Lisbon, Ohio, April 3, 1872; Western Pennsylvania Medical College, Pittsburgh, 1896; professor emeritus of radiology at his alma mater, now known as the University of Pittsburgh School of Medicine; specialist certified by the American Board of Radiology; member of the American Roentgen Ray Society; an officer during World War I; served on the staffs of Allegheny General, Mercy, St. John's, Children's, Passavant, Eye, Ear and Throat and Magee hospitals, all in Pittsburgh; received the Doctor of Science degree from the University of Pittsburgh in 1920; died in Crescent City, Calif., recently, aged 78.

Matthews, Justus Abner ● Minneapolis; born in Foster, Minn., Sept. 27, 1877; University of Minnesota College of Medicine and Surgery, Minneapolis, 1905; veteran of the Spanish-American War; member of the American Academy of Ophthalmology and Otolaryngology; fellow of the American College of Surgeons; became chief of the section on laryngology and rhinology in the Mayo Clinic, Rochester, Minn., in 1906 and in 1915 was appointed associate professor of rhinology and laryngology at the Mayo Foundation, resigning in 1917; died in St. Mary's Hospital, Rochester, Minn., May 21, aged 72, of gangrene of the left leg and uremia.

Chalker, James LeRoy, Ocala, Fla.; Medical College of the State of South Carolina, Charleston, 1912; member of the American Medical Association; died March 13, aged 65, of Parkinson's disease.

Chitwood, John Randolph ● St. Charles, Va.; Medical College of Virginia, Richmond, 1924; died June 7, aged 51.

Clough, Osgood Flint, Poultney, Vt.; Baltimore University School of Medicine, 1897; member of the American Medical Association; president of the board of education; trustee of the Green Mountain Junior College; affiliated with the Rutland (Vt.) Hospital, where he died June 2, aged 75, of nephrosclerosis and chronic myocarditis.

Cohen, Sidney Joseph, San Francisco; New York Medical College, Flower and Fifth Avenue Hospitals, New York, 1943; certified by the National Board of Medical Examiners; resident at the Langley Porter Clinic-Hospital; served during World War II; died suddenly June 1, aged 33, of coronary infarction.

Craig, Albert Ege, Washington, D. C.; Georgetown University School of Medicine, Washington, D. C., 1906; died June 15, aged 74.

Crow, Ira Nelson ● Fairfield, Iowa; State University of Iowa College of Medicine, Iowa City, 1908; fellow of the American College of Surgeons; served as secretary of the Southeastern Iowa Medical Society; at one time on the faculty of his alma mater; affiliated with Jefferson County Hospital; died May 10, aged 69, of carcinoma of the stomach.

Davis, Dudley F., New Albany, Ind.; University of Louisville (Ky.) Medical Department, 1892; member of the American Medical Association; died June 6, aged 83.

Davis, George Harrison, Union City, Ind.; Indiana University School of Medicine, Indianapolis, 1909; member of the American Medical Association; served as president of the Randolph County Medical Society; formerly city health commissioner; affiliated with the Union City Memorial Hospital, where he died June 1, aged 75, of cardiovascular renal disease and uremia.

Deuel, Jacob Bettinger, Rochester, N. Y.; New York Homeopathic Medical College and Flower Hospital, New York, 1915; member of the American Medical Association; served during World War I; affiliated with Park Avenue Hospital; died in Genesee Hospital May 31, aged 62, of cerebral hemorrhage.

Donohue, Bartholomew Francis, Bristol, Conn.; Yale University School of Medicine, New Haven, 1903; member of the American Medical Association; served during World War I; police surgeon; died May 6, aged 73.

Dunn, Miriam Frances ● Washington, D. C.; Johns Hopkins University School of Medicine, Baltimore, 1928; member of the American Psychoanalytic Association and American Psychiatric Association; on the District Commission on Mental Health; died in Johns Hopkins Hospital, Baltimore, June 5, aged 48.

Ewing, Elizabeth Learoyd, Philadelphia; Woman's Medical College of Pennsylvania, Philadelphia, 1922; member of the American Medical Association; died June 4, aged 80.

Farson, John Pickering, Columbus, Ohio; Starling-Ohio Medical College, Columbus, 1907; member of the American Medical Association; served in France during World War I; affiliated with Mercy, Grant, Mount Carmel, St. Ann's and University hospitals; died May 30, aged 67, of coronary occlusion.

● Indicates Fellow of the American Medical Association.

Frank, Austin Cleals, Aurora, Ohio; Western Pennsylvania Medical College, Pittsburgh, 1896; specialist certified by the American Board of Otolaryngology; fellow of the American College of Surgeons; served during World War I; formerly practiced in Pittsburgh, where he was affiliated with South Side Hospital; died in Robinson Memorial Hospital in Ravenna, Ohio, June 5, aged 76, of coronary occlusion.

Freeman, Wiley Howell, Sentinel, Okla.; Vanderbilt University School of Medicine, Nashville, 1882; died March 6, aged 94.

Greeley, Horace, Brooklyn; Long Island College Hospital, Brooklyn, 1903; for many years director of the department of publications of the New York City Health Department; formerly affiliated with Bay Ridge and Lutheran hospitals; died June 10, aged 73, of coronary thrombosis.

Grover, Glenn Goodwin, Seattle; University of Kansas School of Medicine, Kansas City, Kan., 1930; member of the American Medical Association; served during World War II; affiliated with Maynard and Doctors hospitals; died May 29, aged 52, of myelogenous leukemia.

Halberstam, Charles Abraham ✦ New York; Tufts College Medical School, Boston, 1925; assistant professor of surgery, New York Medical College, Flower and Fifth Avenue Hospitals; fellow of the American College of Surgeons; served during World War II; affiliated with Bronx Hospital Metropolitan Hospital and Flower and Fifth Avenue Hospitals where he died June 10, aged 53, of coronary thrombosis.

Halfman, Walter E., New York; New York Homeopathic Medical College and Flower Hospital, New York, 1909; fellow of the American College of Surgeons; emeritus professor of anatomy at his alma mater, now known as the New York Medical College, Flower and Fifth Avenue Hospitals; affiliated with the Metropolitan and Flower and Fifth Avenue hospitals; died June 10, aged 64.

Hanna, Samuel C., Detroit; Detroit College of Medicine; 1903; died in Harper Hospital June 12, aged 75.

Harpel, Kate Stevens, Boone, Iowa; Drake University Medical Department, Des Moines, 1902; died May 13, aged 82, of heart disease.

Hayhurst, Wendell Owen, Burbank, Calif.; Baylor University College of Medicine, Dallas, 1932; member of the American Medical Association; died May 3, aged 43.

Head, Joseph, Philadelphia; University of Pennsylvania Department of Medicine, Philadelphia, 1887; also a dentist; author of "Everyday Mouth Hygiene" and "Modern Dentistry"; died in the Presbyterian Hospital June 5, aged 87, of arteriosclerosis.

Healy, Maurice Arthur ✦ Boone, Iowa; Northwestern University Medical School, Chicago, 1903; died in Boone County Hospital May 12, aged 71.

Hodge, Emory King, Wedowee, Ala.; Atlanta School of Medicine, 1909; member of the American Medical Association; died May 17, aged 67, of cerebral hemorrhage.

Holson, James Butler, Farina, Ill.; Kentucky School of Medicine, Louisville, 1889; surgeon for the Illinois Central Railroad; died June 18, aged 86.

Hood, M. Bowman, Baltimore; Baltimore Medical College, 1900; past president of the Baltimore Medical and Surgical Club; on the staff of Maryland General Hospital; died May 13, aged 72, of heart disease.

Jenkins, Benjamin Duane, Macomb, Ill.; Northwestern University Medical School, Chicago, 1895; member of the American Medical Association; for many years health officer; affiliated with Phelps Hospital, where he died June 3, aged 82, of pericarditis and tumor of the prostate.

Kimbley, Howard Gilbert, San Francisco (licensed in California in 1918); died May 28, aged 62.

Kuraner, Heinz ✦ Lieutenant Colonel, M.C., U. S. Army, Leavenworth, Kan.; University of Kansas School of Medicine, Kansas City, 1931; entered the regular army as a first lieutenant Dec. 8, 1934; served during World War II; died in the crash of a U. S. Air Force transport on a mountain peak 37 miles southwest of Tokyo, April 21, aged 43.

Levy, Joseph G., ✦ New York; Columbia University College of Physicians and Surgeons, New York, 1903; consulting proctologist, Beth David and Harlem hospitals; died June 11, aged 68.

Lewis, John Saunders, Jr., Youngstown, Ohio; Jefferson Medical College of Philadelphia, 1914; member of the American Medical Association and the American Urological Association; past president of the Mahoning County Medical Society; specialist certified by the American Board of Urology; affiliated with the Youngstown Hospital Association; drowned in Rideau Lake, Portland, Ontario, Canada, May 19, aged 59.

Lightfoot, Grace Kathryn, Moline, Ill.; University of Wisconsin Medical School, Madison, 1942; member of the American Medical Association; entered the Mayo Foundation in Rochester, Minn., as a fellow in medicine, serving for three years; affiliated with Lutheran and Moline Public hospitals; died in Marion, Kan., June 12, aged 34.

Lightle, William E., North Berwick, Maine; Baltimore Medical College, 1894; member of the American Medical Association; served on the staff of Goodall Hospital in Sanford; died May 1, aged 82, of cerebral hemorrhage.

McCarty, Claude E., ✦ Dodge City, Kan.; Rush Medical College, Chicago, 1897; fellow of the American Medical Association; city and county health officer; affiliated with St. Anthony Hospital, where he died May 24, aged 76, of heart disease.

McCorkle, William Pyles, Jr., Pittsburgh; Jefferson Medical College of Philadelphia, 1933; member of the American Medical Association; served in the European theatre of operations during World War II; on the staff of Allegheny General Hospital; died May 29, aged 42, of a fractured skull.

McDevitt, Charles Joseph, Santa Barbara, Calif.; University of Cincinnati College of Medicine, 1911; past president of the Cincinnati Academy of Medicine; member of the American Urological Association; fellow of the American College of Surgeons; specialist certified by the American Board of Urology; for many years associated with the U. S. Public Health Service; served during World War II; formerly on the staffs of St. Mary's, Good Samaritan and Deaconess hospitals in Cincinnati; died in Cottage Hospital May 26, aged 62.

McGee, Edward Roderick Benedict ✦ Berlin, N. H.; University of Vermont College of Medicine, Burlington, 1904; fellow of the International College of Surgeons; served during World War I; for three terms mayor of Berlin; died May 24, aged 71.

Mengel, Sterling Frederic ✦ Pottsville, Pa.; Jefferson Medical College of Philadelphia, 1926; specialist certified by the American Board of Ophthalmology; member of the American Academy of Ophthalmology and Otolaryngology; served during World War II; affiliated with the A. C. Milliken Hospital; died June 2, aged 48.

Mesmer, John M. ✦ Buffalo; University of Buffalo School of Medicine, 1896; an Associate Fellow of the American Medical Association; specialist certified by the American Board of Internal Medicine; fellow of the American College of Physicians; affiliated with Millard Fillmore Hospital; died June 12, aged 74, of coronary thrombosis.

Moran, Thomas Anthony ✦ Melrose, Iowa; Barnes Medical College, St. Louis, 1907; secretary of the Monroe County Medical Society; owner of Moran Hospital; died May 23, aged 73, of carcinoma of the stomach.

Nickerson, John Peter ✦ West Harwich, Mass.; Tufts College Medical School, Boston, 1901; school physician; served on the state legislature; honorary member of the staff of Cape Cod Hospital in Hyannis; died in Faulkner Hospital, Boston, May 30, aged 74.

Norton, Earl Fernando, Marvell, Ark.; University of Arkansas School of Medicine, Little Rock, 1918; member of the American Medical Association; past president of the Phillips County Medical Society; affiliated with the Helena (Ark.) Hospital; died May 28, aged 59, of coronary occlusion.

O'Brien, James Nester ✦ Harrisburg, Pa.; Georgetown University School of Medicine, Washington, D. C., 1930; member of the American Medical Association; served during World War II; on the staff of the Harrisburg Hospital; died June 10, aged 44, of heart disease.

Otto, Henry John, New Orleans; Tulane University of Louisiana School of Medicine, New Orleans, 1900; served on the visiting staff of Charity Hospital; died May 2, aged 70, of carcinoma of the tongue.

Schriver, Howard Marcus, Cincinnati; University of Cincinnati College of Medicine, 1943; member of the American Medical Association; served during World War II; interned at Cincinnati General Hospital, where he was a resident; died June 11, aged 32, of pulmonary tuberculosis.

Stevenson, Bonny Miller, Camden, Ark.; University of Nashville (Tenn.) Medical Department, 1908; member of the American Medical Association; formerly vice president of the Arkansas Medical Society; director of the Quachita County Health Department; died in St. Vincent's Infirmary, Little Rock, June 4, aged 70, of cerebral hemorrhage.

FOREIGN LETTERS

ITALY

(From a Regular Correspondent)

FLORENCE, May 15, 1950.

Adenomectomy According to Millin

In a session of the Tuscan-Umbrian Society of Surgery adenomectomy was discussed. Prof. O. Giglioli reported his results in 55 cases of suprapubic extravesical prostatectomy, according to Millin's technic, modified in some details. The mortality was 5.9 per cent; the average hospitalization was 18 days; late results were satisfactory. After surveying the immediate or secondary complications which may occur, the speaker stated that adenomectomy according to Millin, although it may not be a complete substitute for other operative methods, may be recommended because it is tolerated better, causes less postoperative pain and requires shorter hospitalization than other methods.

Dr. Capacci observed excellent or good results in 93 of 100 patients operated on and followed up for varying periods. Results were unsatisfactory in 7 patients; there were 3 cases of cervical stenosis, 2 of recurrent calculosis and 1 of intense and persistent dysuria caused by infection of the cavity from which the prostate had been removed, besides severe dysuria due to functional deficiency of the detrusor urinae. The 7 patients were given proper postoperative treatment, and one year after the intervention the percentage of recovery was highly satisfactory, only 2 patients still presenting dysuria and pollakiuria.

Professor Pieracini discussed the indications and contraindications of the retropubic extravesical method based on a study of 250 operations according to Millin, 135 patients operated on according to Freyer's method, 25 perineal operations and 20 transurethral resections of the neck. He said that the main contraindications occur in obese persons, in persons with disease of the bladder neck and those with small cervical adenomas. An enlarged medium lobe, or one surrounded by small lateral lobes, the contused bladder in calculosis and large vesical calculi are also contraindications. Millin's operation is not feasible in cases of diverticula with ostium distad to the vesical neck and with posterior involvement, in cases of tumor or in patients who have undergone cystotomy or whose condition is generally declining.

Academy of Sciences

The Academy of Sciences of Ferrara convened under the chairmanship of Prof. G. C. Dogliotti. Drs. Gualandi, Pederzini and Temussi gave a preliminary report of results of treatment of brucellosis with paraaminosalicylic acid and its calcium salt. The medicament has been administered orally in daily doses of 8 to 10 Gm. for eight to ten days. Defervescence occurred rapidly on the second or, at the latest, on the seventh day, by crisis in all cases, with considerable improvement of the general condition. Future clinical experiences and systematic laboratory research will establish whether paraaminosalicylic acid possesses a specific therapeutic action with respect to brucellosis.

Drs. Sandri and Cavitti reported their results with the use of the new antibiotics chloramphenicol and aureomycin in abdominal typhus, paratyphus A and brucellosis. The drugs were administered in doses of 0.25 Gm. every three hours, until apyrexia was obtained, and treatment was continued only for a few more days, because of the costliness of the antibiotic. In the cases of brucellosis, apyrexia occurred on the second or third day of treatment with aureomycin, but there were two relapses. Permanent cures were obtained with chloramphenicol in the cases of abdominal typhus and of paratyphus A. Two patients with paratyphus treated with aureomycin at the initial stage did not react to the antibiotic, but resolution resulted from combined treatment with chloramphenicol.

The use of the antibiotics influenced favorably the course of the fever in every instance. Penicillin and streptomycin controlled fever more effectively in cases of relapse after treatment with chloramphenicol or with aureomycin than at the beginning of the disease.

Drs. Ruberi and Neri reported on 11 patients with typhoid treated with chloramphenicol. The initial dosage was 1 Gm. every hour for the first three hours, followed by a maintenance dose of 0.25 Gm. every 4 to 6 hours for four days. The speakers observed a drop in temperature between the seventy-second and ninetieth hours, by crisis in 70 per cent of their patients and by lysis in 30 per cent, without sudoresis, cutaneous exanthema, stomatitis or glossitis. Tolerance was excellent. With respect to hemopoietic function, there was no observation of leukopenia or disappearance of eosinophils; on the contrary, mild eosinophilia was observed in 6 cases. There were 5 recurrences, which the speakers attributed more to incomplete sterilization of Eberth's bacillus than to insufficient dosage.

Drs. Magri and Melli reported on their results in 13 cases of brucellosis treated with aureomycin. The dosage adopted was 1 Gm. of the antibiotic, divided in 4 tablets of 250 mg. each, for a total period of six to eight days. The defervescence was rapid and definitive in 8 cases. There were recurrences in 5 instances, perhaps due to the insufficient quantity of the antibiotic used, but the fever subsided when the antibiotic therapy was resumed.

PARIS

(From a Regular Correspondent)

May 1, 1950.

Reform of Medical Teaching

On April 28, 1950, before the "*Cercle* Claude Bernard," Prof. R. Debre, member of the National Academy of Medicine, discussed two principal problems: (1) organization of the teaching staff and (2) recruiting this body.

After various competitive examinations, which require immense effort, the candidate has to work in a hospital, obtain scientific recognition and, at the same time, be a practicing doctor to obtain income. When he becomes a teaching professor, his energy is utilized in many functions in addition to those pertaining to the faculty, which may be to the detriment of teaching and scientific research.

The recruiting of candidates is effected separately for each faculty, which results in a plethora of candidates in Paris. As a result provincial universities often suffer from a certain lack of highly qualified teaching staffs; their recruitment is restricted to the district, and they are unable to supply adequately qualified chiefs of services for all clinics and professors for each professorship of the faculty. As a consequence students migrate to Paris, which already is overcrowded. Professor Debré believes that two kinds of reforms are necessary: First, the

teaching staff ought to devote full time to teaching. Second, recruiting should be reorganized by establishment of national competition for all faculties of medicine. According to the author, there are a sufficient number of vacancies of chiefs of services in the various faculties to accommodate young candidates. The young chiefs of services after a certain period would be promoted to more important universities, according to their merits. One of the fundamental problems is financial. To interest young candidates in teaching, it is necessary to allow them a standard of living nearly equivalent to those of a practitioner. According to the author, the social security organization ought to provide the necessary credits. Actually this reform would call for the close collaboration of three organizations: the ministries for public health and for national education and the social security organization. Later Debré mentioned the objections of the critics of this proposal, among them the fear of sacrificing the individuality of the various universities. At the end of his statement, Debré analyzed two important points: (1) The choice between an open university with a large number of students and the medical school with a restricted number of students. He thinks the French tradition of open universities ought to be preserved but that in this case the students ought to be allotted in small groups, as from the preparatory year, and those should be in charge of monitors, who may be "interns" (medical resident students). Another important question is the postgraduate education of practitioners, since medical science continually evolves new methods of treatment. The teaching staff, under the proposal, would become also a school for practitioners.

Council for Coordination of International Congresses of Medical Sciences

The Council for the Coordination of International Congresses of Medical Sciences has organized two symposiums in 1950, under the auspices of UNESCO and the World Health Organization: 1. Biology of the muscle and diseases of the striated muscle, Aug. 31 to Sept. 6, 1950, at the Abbaye de Royaumont near Paris. The president of the symposium is Professor Polonovski. Representatives from France, Great Britain, Hungary, Switzerland, Belgium, U.S.S.R., the United States and Denmark have been invited to participate. 2. Pathologic geography and demography of cancer, July 29 to Aug. 5, 1950, at Regent's Park College, Oxford, England. The president of the symposium is Prof. J. Maisin. Representatives from France, Denmark, the United States, Great Britain, India and Netherlands have been invited to participate. The Committee of Coordination of the reports and indexes of the medical and biologic sciences of UNESCO is preparing a universal list of medicobiologic periodicals, to be published about October 1950. This list is jointly subsidized by UNESCO and WHO.

The first quarterly bulletin of the Council for the Coordination of International Congresses of Medical Sciences has been published with the aid of WHO and UNESCO. This bulletin will serve as a link between the members of the Council; at the same time it represents a step toward coordination of medical sciences.

International Congress of Amebiasis

The International Congress of Amebiasis will be held at Chatel-Guyon Sept. 15-16, 1950, under the presidency of Professor Chabrol and the honorary presidency of Sir Philip Manson-Bahr, Medecin General Inspecteur Dopter and Professors Carnot and Chiray. The reports will be divided into four sections. In the clinical section reports will be read by Lebon (Algiers), on the nondysenteric forms of intestinal amebiasis in North Africa; by Sarrouy (Algiers), on infantile amebiasis; by Chiray and Chene (Paris), on the formes frustes, of hepatic amebiasis; by Payet (Madagascar), on hepatic amebiasis; by Grailly and Moretti (Bordeaux), on the pathologic changes in hepatic amebiasis; by Moutier (Paris), on amebiasis and rectocolic cancers, and by Pieri (Marseille), on amebiasis and lambliasis. In the biologic section, Garin (Lyons) and Coudert will discuss the cultivation and the identification of the amebas of the intestine; Deschiens (Pasteur Institute) will speak of the biology of the dysenteric ameba, affinities, tropism and relations with the pathogenic potency, and Lavier (Paris) will discuss hepatic distomiasis. In the therapeutic section, Crosnier (Val de Grâce) will report on the treatment of amebiasis with conessine; Blanc and Siguier will explain maintenance treatment in chronic amebiasis. In the hygiene section, Coutelen (Lille) will report on intestinal parasitism in school age children; Dujarric de la Rivière (Pasteur Institute) will explain the epidemiology of amebiasis; Laffere, Becmeur and Lamotto (Morocco) will discuss ancylostomiasis in the phosphate mines and intestinal infestation with parasites in Moroccan native surroundings.

Communications relative to the congress should be addressed to the General Secretary, Grands Thermes, Chatel-Guyon.

SWEDEN

(From a Regular Correspondent)

STOCKHOLM, June 14, 1950.

Professor Lichtenstein's Valedictory Address

Professor Lichtenstein's name has been associated with pediatrics for so many generations of medical students that the choice of the development and problems of this discipline as the subject for his valedictory address on terminating his academic association with the Karolinska Institut was appropriate. With his work at Crown Princess Louise's Children's Hospital as a background, he pointed out that, until the turn of the century, infants under the age of 1 year were on principle not admitted to this hospital because of the serious risk of hospital infections. Of late years between 25 and 30 per cent of the patients in the medical wards of this hospital were infants, although the risk of hospital infections, air borne infections in particular, has not been entirely eliminated. Only a few generations ago the average stay of a patient in this hospital was two months. Now it is about 11 days. This is particularly remarkable because the technic of diagnosis is far more complicated than it was. Advances in diagnosis and therapeutics require a considerable increase in the number of doctors and nurses, of whom there is a serious shortage, particularly for night service.

Professor Lichtenstein also pointed out that during the last two or three decades there has been a striking change in the character of the diseases treated in a children's hospital. Diseases such as rickets have almost ceased to exist in Stockholm, and articular rheumatism with heart disease has become relatively rare. The consistent prophylaxis of rickets with vitamin D has tended to eliminate this disease as a national scourge, and the decline of the rheumatic diseases in childhood seems to reflect a higher standard of living, better housing and better public health measures. On the other hand, there has been little change for the better in infant mortality during the first two weeks of life—a stalemate which Professor Lichtenstein hopes to see overcome by better team work between obstetricians and pediatricians. The diseases now coming to the fore in a typical children's hospital are the psychosomatic diseases, among which asthma and other allergic conditions have become prominent, so much so that they present a sociomedical problem. Ulcerative colitis and gastric ulcer have also become comparatively common in childhood, and at present about 20 per cent of all the patients in the medical wards of Crown Princess

Louise's Children's Hospital have psychogenic ailments. It is therefore natural that the growing interest now taken in child psychology reflects one of the greatest advances in modern pediatrics.

Bicentenary of Dr. Pehr Dubb

Dr. Pehr Dubb, who was born Jan. 14, 1750, and died Jan. 6, 1834, made such an impression on his contemporaries as a social reformer that memory of him is still fresh in Gothenburg, where he was the life and soul of the medical profession for many decades. In an address commemorating the bicentenary of Pehr Dubb at a meeting of the Medical Society of Gothenburg, Dr. Sven Eldh painted an attractive picture of his subject. Dubb studied medicine at Uppsala, where he was particularly interested in physics and chemistry and where he published his first medical article, at the early age of 20, on the subject of Uppsala's water supply, which he had analyzed. After qualifying as a doctor in 1776, he came to Gothenburg to practice medicine. In the following year he presented his doctorate thesis, on the treatment of syphilis with special reference to inunction with mercury. After studying hospital conditions in Paris, he returned to Gothenburg, where he took the lead in creating the Sahlgren Hospital, the funds for which were provided by an important legacy by Niclas Sahlgren. With accommodation for only 12 patients when it was first opened in 1782, it was expanded in a few years to provide for 30 inpatients, each of whom could have a bed to himself—a privilege commented on favorably at the time by a foreign visitor who had found 2 patients to each bed in another Swedish hospital.

His experience with the Sahlgren Hospital soon led Dubb to take an active interest in welfare work for incurables and paupers. At the turn of the century approximately 1,000 of Gothenburg's 15,000 inhabitants were paupers, and mendicancy had become a veritable nuisance. For nearly three decades Dubb was busy organizing welfare work in the town, often in conflict with local authority slow to fall into line with his reforms. But they came to be so appreciated that in 1810 he was appointed to a committee charged with welfare work among the poor throughout Sweden. Dubb was also the founder of a school of carpentry in Gothenburg. Because of his forceful personality, tempered by diplomacy, and his gift for apparently effortless administration, he was a successful organizer. At a time when physicians were apt to sneer at surgeons and surgeons to sneer at physicans, and doctors in general to look on each other as competitors, Dubb became the center of a medical fraternity whose members met often in Gothenburg to discuss scientific problems. With advancing years Dubb increased in bulk, and there were times when, on visiting a patient housed in an upper story approached by narrow stairs with no railing, "Pappa Dubb" had to be roped round the waist and hauled aloft. Only a doctor of his established fame could have survived this ordeal without loss of face.

Award of Anders Retzius Medal to Dr. Leonard Colebrook

The close attention with which Scandinavians follow advances in medicine abroad enables them from time to time to act as umpires, to mark their appreciation of good work by appropriate awards. Last spring the Swedish Medical Society invited Dr. Leonard Colebrook of England to lecture on his work in the treatment of burns and scalds. He supplemented his lecture by a demonstration with a colored film. In awarding him the Anders Retzius silver medal, the chairman of the Swedish Medical Society said:

"I have the pleasure to announce that the Board of our Society has decided to present to you the Anders Retzius silver medal. This medal is instituted in remembrance of the one hundredth anniversary of the birth of the famous Swedish scientist Anders Retzius. We award it to you as a token of our appreciation of your work—important in war and in peace—and of our admiration of your person. On behalf of our Society I beg you to accept this medal, which we hope will in a pleasant way remind you of your visit to Stockholm and your lecture in the Swedish Medical Society."

TURKEY

(From a Regular Correspondent)

ANKARA, May 22, 1950.

Kala-Azar in Turkey

Ord. Prof. Ihsan Hilmi Alantar of Istanbul University diagnosed the first case of kala-azar in Turkey in 1937; there were 3 cases in 1938, 3 in 1939, 2 in 1940, 11 in 1945, 9 in 1946, 3 in 1948 and 2 in 1949. Sixty per cent of the patients were living in Istanbul; the others had come from the Marmara coastal regions, Bursa Karamursel, Geyve, Gebze, Derince and Tekirdag, with several patients from the southern coastal region, Adana and Mersin. The insects found in homes and examined at the Istanbul Institute of Zoology proved to be all Culex, Drosophyla and Psychoda; the frail Phlebotomus, appearing only at night, eluded çapture. The majority of the patients were first seen during the early months of the year. Kala-azar being insidious, incubation probably occurred during August, September and October, the hot and damp season. Fifty-five per cent of the patients were 2 to 5 years of age, 28 per cent were 5 to 7 and 17 per cent were 0 to 2 years of age. Leishmania organisms were recovered from 35 patients, with Plasmodium in 3 of them. The spleen was extremely enlarged in all patients; it extended to the pubis in 70 per cent, and in 2 patients it had at the same time grown in the opposite direction. Examination of the blood revealed hypochromic anemia; the red cell count was 1.5 to 2.5 million; hemoglobin was 40 to 60 per cent, and there was severe leukopenia and monocytosis. The result of the Chopra-Gupta test was positive in 77 per cent, the formol-gel test in 46.5 per cent and the Brahmachari test in 60 per cent. In 25 per cent the serum, though fat and cholesterol content was normal, after several hours turned snow white, which may be kala-azar specific. Sternal puncture in all patients revealed Leishmania donovani in 79 per cent and spleen puncture in 85 per cent. New infections were successfully treated with ethylstibamine, but in most patients the condition was chronic, with complications such as agranulocytosis, noma, Vincent's angina and cachexia, and the outcome was fatal. Of the 35 patients 26 per cent died, 31 per cent were cured and 43 per cent were improved.

Kala-azar being comparatively rare in Turkey and chiefly confined to the coastal regions, the symptoms are often confused with those of malaria. The Ministry of Health and Social Assistance now requires that Leishmania organisms be looked for in all cases in which diagnosis of malaria is not absolutely confirmed.

Ord. Prof. Hans Winterstein Retires

A reception was held in honor of Emeritus Prof. Hans Winterstein, who, because of the age limit (70), retired after seventeen years as director of the Institute of Physiology of the Istanbul University Medical School. On this occasion Professor Winterstein was presented with an issue of the university periodical published in his honor, comprising 415 pages (Istanbul Universitesi Tip Fakültesi Mecmuasi) with 41 original contributions by the medical faculty staff.

Graduating from Prag University in 1903, Dr. Winterstein went to Germany for postgraduate work. At Göttiingen University he worked with Professor Verworn and with Professors Langendorff and Nagel at the University of Rostock, where he lectured as private dozent, in 1910 he became professor and at the age of 31 professor ordinarius at the Uni-

versity of Breslau, where he taught for 23 years. When Istanbul University was reorganized in 1933 Professor Winterstein was invited to accept the directorship at the Institute of Physiology. Professor Winterstein has written a textbook of physiology and numerous treatises on related subjects.

BRAZIL

(From a Regular Correspondent)

RIO DE JANEIRO, June 20, 1950.

Studies on Murine Typhus in Rio de Janeiro

Drs. J. V. Vasconcellos, J. Travassos and H. G. Pereira, of the Rickettsias Division, Oswaldo Cruz Institute, recently published two more reports on the problem of murine typhus in Rio de Janeiro. In a previous letter in THE JOURNAL (January 21, page 197) the authors were reported to have been able to prove the existence of murine typhus in rats of this city, first through serologic examinations and later by the isolation and identification of several strains of Rickettsia mooseri. To complete their study of identification and to improve knowledge of the pathogenic and antigenic properties of these strains taken from the brains of rats, two strains were grown in the yolk sacs of developing chick embryos after Cox's method. Most of the embryos died between the fifth and seventh day after inoculation, some showing hemorrhages. From the fourth passage onward, membranes with rickettsiae were obtained. Suspensions of infected yolk sac membranes of the fourteenth, seventeenth and twentieth passages, inoculated in guinea pigs and white rats, were pathogenic for the animals. However, successive passages showed a gradual diminution in the virulence of the strains. The serums of the inoculated animals, obtained at varying intervals after infection, contained specific murine antibodies even in animals that had not shown any signs of infection. Results of the immunization tests show that the two strains have a tendency to dissociation of the pathogenic and the immunizing activities, as the former decreases decidedly with the increase in the number of passages while the latter is conserved. This may offer the possibility of selecting a strain which could be used for immunization with a live vaccine. Dilutions of infected yolk sac suspensions inoculated intradermally in rabbits produced a cutaneous lesion, the intensity of which depended on the amount of live rickettsial inoculum. This action was neutralized by R. mooseri antiserum. Antigens prepared from membranes infected with these strains and with the Wilmington strain were titrated against standard serums and were always found to fix complement to the same titer with murine antiserums, thus showing no antigenic difference. The new experimental data obtained confirmed the identity of the strains of rickettsiae with R. mooseri, the cause of murine typhus.

The second report deals with the problem of human hosts of murine typhus in Rio de Janeiro. To investigate this possibility the authors performed serologic tests on 680 stevedores and other workers of the port zone where enzootic murine typhus in rats has already been described. These serums were examined by a rickettsia slide agglutination test (after Castañeda); 23 were positive (1:2 dilution in 18 cases, 1:4 in 1 case, 1:8 in 1 case and 1:10 in 3 cases). Complement fixation tests were also performed with R. mooseri Plotz antigen (negative in 17 cases, and with the titer 1:5 in 5 cases and 1:10 in 1 case) and R. rickettsi Bengtson antigen (1:5 in 1 case and partial fixation at 1:5 in 2 cases). The positive results of these tests are interpreted by the authors with reservation, except in 1 case, in which they were able to give the patient serologic and allergy tests with results suggesting that the patient had had an attack of murine typhus nine years earlier.

Correspondence

THE GOVERNMENT CANNOT FORCE SOCIALIZED MEDICINE ON US

To the Editor:—A great many persons speak of socialized medicine as an ogre which may overtake and destroy us willy-nilly. Such is not the case. The physicians of this country do not have to accept socialized medicine even if the bill for National Compulsory Health Insurance is passed. The government may pass the law and tax the people, but it cannot force physicians to give up their private practices and become government employees, unless they so desire. At least, the government cannot do this unless we go much further along toward Russian methods than we have already gone.

Entirely too little stress has been placed, in the campaign against socialized medicine, on the fact that we are free agents and do not have to become government employees except by our own volition. It is true that the government will try to browbeat and bribe the majority of doctors into coming into their system, just as they did in England. The physicians of this country, however, should make it clear that they will not be a party to such a system. Agencies of the government have already held out the bait of a $14,000 a year minimum to general practitioners and $28,000 a year for specialists. There will undoubtedly be very much complimentary soft-soap talk on the part of the government agencies trying to entice physicians into the trap. Once in, it will be impossible to get out. Also, once in, no matter how attractive the initial bait seemed, the government will be free to change the rules as it sees fit. There is nothing to prevent the federal authorities from changing the rules and reducing salaries. The doctors will have no recourse. They will simply have to go along once they are in. It might be said that a doctor could resign from the system and return to private practice if he so desired. Anyone who is familiar with the system in England knows how difficult that is. Once the system becomes entrenched, all but the very rich are participants of it, and do not go to private doctors. They simply cannot afford to pay for the high cost of the system and doctor's fees besides.

Let every doctor take counsel with himself and decide now what he would do should the government pass S-1679 or any other similar bill. Let him consider whether he wants to give up his present independence for the bait which will be held out by the government in the form of security. Under the present system each physician is master of his own fate (except for income taxes). Under the government system his very income would be subject to the whim of government officials and his income tax would be higher still due to the tremendous cost of the system and other similar government plans. Remember that the British tried to trade their independence for security and now they have neither. Many people are pointing the finger of scorn at them as a decadent nation.

Our fight against socialized medicine and all other forms of socialism should be continued. However, so far as socialized medicine is concerned, if it ever comes, it is the fault of American physicians. If it does come, let us not say afterward that "the government put it over on us." The government cannot put it over on us if we hold steadfast to our principles and do not succumb to government bribes and browbeating. If any physician is in doubt as to what he would do, let him go into a closet by himself and commune with his own conscience. Let him face squarely the issue as to whether he wants to be bought—as to whether he wants to sell his independence for government promises which may be changed at any moment.

AMOS R. KOONTZ, M.D., Chairman,
Committee on Public Medical Education,
Baltimore City Medical Society.

FREE SAMPLES

To the Editor:—A number of recent communications in THE JOURNAL regarding free physicians' samples prompts me to submit to you the following observations: In the six month period just ended, I have received through the United States mail, both at my home and at my office, advertising literature and generous samples of a wide variety of products comprising 47 packages, weighing in total 6.9 pounds, and 357 pieces of letter mail, weighing in total 22.3 pounds. Estimated on a yearly basis, the cost of postage for this amount of material (58.4 pounds total per annum) would come close to $20. Multiply these figures by the total number of registered physicians receiving such consignments, add to it innumerable duplications, incorrect or obsolete addresses and forwardings, and the total burden on the United States mails mounts to a staggering figure, both in man-hours and in dollars. Surely something can and should be done to curb this totally unnecessary load on an already overtaxed postal service imposed by almost all the pharmaceutical houses that already reach the same section of the public (i. e., physicians) through the more acceptable form of advertisement in medical journals.

Fully as important is the hazard created by the delivery of potent drugs through the open letter slot in a home such as mine, where small children, if undiscovered, might well indulge in an unbridled orgy of various potent drugs with certainly inconvenient if not disastrous results.

CALDERON HOWE, M.D., Boston.

Council on Medical Education and Hospitals

ADDITIONS TO THE LIST OF FOREIGN MEDICAL SCHOOLS

At their recent meetings the Council on Medical Education and Hospitals and the Executive Council of the Association of American Medical Colleges voted to add the following six schools to the list of foreign medical schools issued by these two organizations in February 1950.[1] The list must still be considered a preliminary one and will be supplemented from time to time in the future as information concerning other foreign medical schools is compiled. Those interested can obtain the complete list issued in February with the present additions from the office of the Council on Medical Education and Hospitals, 535 North Dearborn Street, Chicago 10.

Lebanon

American University of Beirut School of Medicine

Switzerland

The recommendation with respect to the following medical schools in Switzerland applies only to those graduates of Swiss medical schools who hold the Swiss Federal Diploma issued by the Federal Department of the Interior (Eidgenössisches Departement Des Innern, Departement Federal de L'Interieur) and obtainable only by Swiss citizens, or who hold the Certificate of Medical Studies, (Akademische Zeugnis, Certificat d'Etudes Medicales) which is issued by the Departments of Education of the cantonal government and which is awarded to those not citizens of Switzerland who complete a course of study and pass examinations equivalent to those taken by Swiss citizens in qualifying for the Swiss Feredal Diploma.

The recommendation does not apply to those holding only the M.D. degree from Swiss universities or those who have taken only faculty examinations and hold certificates other than the Swiss Federal Diploma or its equivalents; the Akademische Zeugnis or Certificat d'Etudes Medicales. The M.D. degree in Switzerland is frequently awarded on the basis of a thesis written during as little as one year in residence. Faculty diplomas may be issued to students who have not completed the full course of study and who have not passed the examinations required for the Swiss Federal Diploma or its equivalents.

Officials of State Boards and of other organizations who are in doubt as to the nature of credentials presented by individual graduates of Swiss schools are urged to communicate with the Director of the Schweizerisches Gesundheitsamt, Bern, Switzerland.

University of Basel Faculty of Medicine
(Universität Basel Medizinische Fakultät)
University of Bern Faculty of Medicine
(Universität Bern Medizinische Fakultät)
University of Geneve Faculty of Medicine
(Université de Genève Faculté de Medecine)
University of Lausanne Faculty of Medicine
(Université de Lausanne Faculté de Medecine)
University of Zurich Faculty of Medicine
(Universität Zurich Medizinische Fakultät)

1. J. A. M. A. 142: 587 (Feb. 25) 1950.

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY: *Oral.* Chicago, Oct. 8-11. Sec., Dr. Curtiss B. Hickcox, 745 Fifth Ave., New York 22.

AMERICAN BOARD OF DERMATOLOGY AND SYPHILOGOY: *Written.* Various locations, Sept. 14. *Oral.* Detroit, Oct. 20-22. Sec., Dr. George M. Lewis, 66 East 68th St., New York 21.

AMERICAN BOARD OF INTERNAL MEDICINE: *Written.* Oct. 16. Asst. Sec., Dr. William A. Werrell, 1 West Main Street, Madison 3, Wis.

AMERICAN BOARD OF NEUROLOGICAL SURGERY: Chicago, Oct. 1950 Applications no longer accepted. Sec., Dr. W. J. German, 789 Howard Ave., New Haven, Conn.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY. *Part I, Written Examination and Review of Case Histories.* Various locations, Feb. 2, 1951. Final date for filing applications is Nov. 5. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh 6.

AMERICAN BOARD OF OPHTHALMOLOGY: *Written.* Various Centers Jan. 5-6, 1951. San Francisco, March 11-15; New York, May 31-June 4. Sec., Dr. Edwin B. Dunphy, 56 Ivie Road, Cape Cottage, Maine.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY: *Part II.* Chicago, Jan. 25-26. Final date for filing applications is Aug. 15, 1950. Sec., Dr. Harold A. Sofield, 122 South Michigan Avenue, Chicago 3.

AMERICAN BOARD OF OTOLARYNGOLOGY: Chicago, October. Sec., Dr. Dean M. Lierle, University Hospital, Iowa City.

AMERICAN BOARD OF PATHOLOGY: St. Louis, Oct. 13-14. Sec., Dr. Robert R. Moore, 507 Euclid Ave., St. Louis 10.

AMERICAN BOARD OF PEDIATRICS: *Oral.* Chicago, Oct. 13-15 and Boston, Dec. 1-3. Exec. Sec., Dr. John McK. Mitchell, 6 Cushman Road, Rosemont, Pa.

AMERICAN BOARD OF PHYSICAL MEDICINE AND REHABILITATION: *Oral and Written.* Boston, Aug. 26-27. Final date for filing applications is April 1. Sec., Dr. Robert L. Bennett, 30 N. Michigan Ave., Chicago.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY: Next examination, December 1950. Final date for filing applications is Sept. 1.

AMERICAN BOARD OF SURGERY: *Written.* Various Centers, Oct. 25. *Written.* Various centers, March 1951. Final date for filing applications is Dec. 1, 1950. Sec., Dr. J. Stewart Rodman, 225 South 15th Street, Philadelphia.

AMERICAN BOARD OF UROLOGY: Chicago, Feb. 10-14, 1951. Final date for filing applications is Sept. 1, 1950. Sec., Dr. Harry Culver, 7935 Sunnyside Road, Minneapolis 21.

BOARDS OF MEDICAL EXAMINERS

ALASKA:* Juneau, Sept. 5. Special examinations given on application. Sec., Dr. W. M. Whitehead, Box 140, Juneau.

CALIFORNIA: *Examination, Written.* Los Angeles, Aug 21-24; Sacramento, Oct. 16-19. *Examination, Oral and Clinical for Foreign Medical School Graduates.* Los Angeles, Aug. 20; San Francisco, Nov. 12. *Reciprocity, Oral Examination.* Los Angeles, Aug. 19; San Francisco, Nov. 11. Sec., Dr. Frederick N. Scatena, 1020 N Street, Sacramento 14.

IOWA: *Written.* Des Moines, Dec. 4-6. Acting Director, Division of Examination and Licensure, State Department of Health, 1027 Des Moines St., Des Moines.

NEVADA: *Endorsement.* Carson City, August 7. Sec., Dr. George H. Ross, 112 Curry Street, Carson City.

NEW HAMPSHIRE: Concord, Sept. 13. Sec., Dr. John Samuel Wheeler, 107 State House, Concord.

NEW MEXICO:* Santa Fe, Oct. 9-10. Sec., Dr. Charles J. McGoey, Coronado Building, Santa Fe.

NORTH CAROLINA: *Reciprocity.* Raleigh, Sept. 25. Sec., Dr. Ivan Proctor, 226 Hillsboro St., Raleigh.

PUERTO RICO: *Examination.* Santurce, Sept. 5-9. Sec., Mr. Luis Cueto, Cell, Box 3717, Santurce.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ALASKA: *Examination.* Juneau, last week in August. Sec., Dr. C. Earl Albrecht, Box 1931, Juneau.

COLORADO: *Examination.* Denver, Sept. 13-14. Sec., Dr. Esther B. Starks, 1439 Ogden St., Denver 3.

FLORIDA: Jacksonville, Nov. 11. Sec., Mr. M. W. Emmel, University of Florida, Gainesville.

MICHIGAN: *Examination.* Ann Arbor, Oct. 13-14. Sec., Miss Eloise LeBeau, 101 North Walnut Street, Lansing 15.

NEBRASKA: *Examination.* Omaha, Oct. 3-4. Director, Mr. Oscar F. Humble, Room 1009, State Capitol Building, Lincoln 9.

NEW MEXICO: *Examination.* Santa Fe, Sept. 17. Sec., Mrs. Marguerite K. Cantrell, Box 1522, Santa Fe.

OKLAHOMA: *Examination.* Oklahoma City, Sept. 15. Sec., Dr. Clinton Gallaher, 813 Branif Building, Oklahoma City.

OREGON: *Examination.* Portland, Sept. 9. Sec., Dr. C. D. Byrne, University of Oregon, Eugene.

RHODE ISLAND: *Examination.* Providence, August 9. Chief, Division of Professional Regulation, Mr. Thomas B. Casey, 366 State Office Building, Providence.

TEXAS: *Examination.* Austin, October. Sec., Brother Raphael Wilson, 306 Nalle Building, Austin.

WISCONSIN: *Examination.* Milwaukee, Dec. 2. Sec., Mr. W. H. Barber, Scott and Watson Sts., Ripon.

CURRENT MEDICAL LITERATURE

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in Continental United States and Canada for a period of five days. Three journals may be borrowed at a time. Periodicals are available from 1939 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

Alabama State Medical Assn. Journal, Montgomery

19:257-288 (March) 1950

Diagnosis and Treatment of Amenorrhea. H. H. Thomas, J. F. Harsh and W. N. Jones.—p. 257.
General Practitioner as Citizen in His Community. J. P. Sanders. —p. 262.
Fractures of Middle Third of Face. R. R. Stutts.—p. 267.

American J. Obstetrics and Gynecology, St. Louis

59:715-948 (April) 1950. Partial Index

*Endometriosis and Pregnancy. H. H. Ware Jr.—p. 715.
Pregnancy and Diabetes. W. P. Given, R. G. Douglas and E. Tolstoi. —p. 729.
Complete Abdominal Hysterectomy: Simplified Technique and End Results in 500 Cases. A. H. Aldridge and R. S. Meredith.—p. 748.
Ovarian Carcinoma Arising in Endometriosis. G. W. Corner Jr., C.-Y. Hu and A. T. Hertig.—p. 760.
Effect of Adrenalin on Pregnant Human Uterus. I. H. Kaiser and J. S. Harris.—p. 775.
Study of Histologic Structure of Cervix Immediately Post Partum. L. V. Dill.—p. 785.
Patterns of Braxton Hicks Contractions and Gradient of Uterine Activity During First Stage of Labor: Study with Multichannel Tokodynamometer. B. Delson, S. Lubin and S. R. M. Reynolds.—p. 795.
*Penicillin Therapy of Syphilitic Pregnant Woman: Its Practical Application to Large Urban Obstetrical Service. V. S. Wammock, O. M. Jarrozino, N. R. Ingraham Jr. and N. E. Clair.—p. 806.
Structure and Function of Cortex of Human Ovary. O. H. Schwarz and C. C. Young Jr.—p. 820.
Face and Brow Presentation: Experience of Johns Hopkins Hospital, 1896 to 1948. L. M. Hellmann, J. W. W. Epperson and F. Connally. —p. 831.
Ovulation in Lactating Women. I. C. Udesky.—p. 843.
Use of Ultraviolet Light and Fluorescent Dyes in Detection of Uterine Cancer by Vaginal Smear. H. P. Friedman Jr.—p. 852.
Clinical Evaluation of 3,500 Vaginal Cytologic Studies. N. B. Reichter, B. W. Mooney and E. Bechtold.—p. 860.
Psychosomatic Aspects of Sterility. W. S. Kroger and S. C. Freed. —p. 867.
Metachromasia in Endometrium. D. G. McKay.—p. 875.
"Pelvic Drive" in Obstetrics: X-Ray Study of 100 Cases. E. M. Gold. —p. 890.
Abnormal Bleeding in Obstetrical and Gynecological Conditions. C. A. Lathrop, W. J. Dieckmann and J. G. Allen.—p. 897.
Effect of Hysterectomy on Carcinoma of Cervix. J. A. Wall and W. R. Klingensmith Jr.—p. 901.

Endometriosis and Pregnancy.—Ware stresses on the basis of a review of the literature, the prevalence of endometriosis in women of childbearing age. The association of endometriosis and sterility has been stressed repeatedly. Ware found that when efforts were made to preserve the childbearing function of women with endometriosis, pregnancy often occurred a few months after the operation. A follow-up of these patients revealed that they frequently remained symptom free after delivery and that in a few patients a second pregnancy occurred. He cites the histories of 13 women in whom 16 pregnancies occurred, 12 after a conservative operation for endometriosis. In 1 patient endometriosis was not diagnosed until she was delivered by cesarean section. Fourteen of the pregnancies resulted in term or near term deliveries of normal living babies. Conservative surgical treatment with preservation of the childbearing function is recommended whenever possible in cases of endometriosis.

Penicillin for Pregnant Women with Syphilis.—Wammock and his associates analyzed the results of penicillin therapy in 344 pregnant syphilitic women treated at the Philadelphia General Hospital since September 1946. A total of 2.4 million Oxford units of aqueous penicillin (crystalline G) was given intramuscularly in sixty individual doses of 40,000 units each every three hours (7½ days). To evaluate the results of penicillin therapy the authors resorted to three types of control. First, they determined the outcome of pregnancies in the obstetric service as a whole with the syphilitic group excluded. Second, they determined the outcome of pregnancy among 75 syphilitic women who were delivered without receiving any antisyphilitic therapy. Third, they analyzed the outcome of 390 pregnancies (401 infants) in which the syphilitic mother had been treated with arsenical and bismuth compounds. In 5,596 nonsyphilitic women the results of deliveries showed that the anticipated unsatisfactory outcome of pregnancy is 12.4 per cent. When adequate arsenic and bismuth therapy of the syphilitic women was employed before or during pregnancy, or both, 93.8 per cent normal full term infants resulted and 2 per cent living syphilitic infants. When penicillin was employed either before or during pregnancy 94.5 per cent normal full term infants resulted and 1.7 per cent living syphilitic infants.

American Journal of Ophthalmology, Chicago

33:513-672 (April) 1950

Training Methods and Aids in Teaching of Ophthalmology. V. A. Byrnes.—p. 513.
Beta-Ray Application to Eye with Description of Applicator Utilizing Sr^{90} and Its Clinical Use. H. L. Friedell, C. I. Thomas and J. A. Krohmer.—p. 525.
Blastomycosis of Conjunctiva. E. Theodorides and Koutrolikos.—p. 535.
Beta Irradiation: Evaluation of Radium-D Applicatory for Ophthalmic Use. P. M. Wilson.—p. 539.
Effect of Low-Voltage Roentgen Rays on Normal and Vascularized Cornea of Rabbit: Preliminary Report on Philips Machine. H. G. Scheie, R. H. Dennis, R. C. Ripple and others.—p. 549.
Syndrome of Vogt-Koyanagi. N. S. Jaffe.—p. 571.
Principles of Surgery on Extraocular Muscles: Part II. Choice of Operation in Concomitant Strabismus: Vertical Muscles; Paralytic Strabismus; Phorias. H. M. Burian.—p. 577.
Practical Points About Recession Operation. R. G. Scobee.—p. 583.
Congruous Homonymous Hemianopia with Macular Sparing: Report of Case. F. A. Vesey.—p. 590.
Altitudinal Hemianopia: Report of 2 Cases. W. L. Berkley and F. R. Bussey.—p. 593.
Lysozyme Content of Tears. E. Regan.—p. 600.
Clinical Management of Ocular Syphilis. B. F. Payne, J. A. Goldberg and J. T. Simonton.—p. 605.
Experiment in Glaucoma Case Finding: Preliminary Report. E. M. Carpenter, S. S. Brav and V. I. Seidel.—p. 611.

American Journal of Psychiatry, New York

106:721-800 (April) 1950. Partial Index

General Principles of Psychotherapy. L. Alexander.—p. 721.
Psychiatrist as Marriage Counselor. R. W. Laidlaw.—p. 732.
Rorschach Diagnosis and Interpretation of Involutional Melancholia. R. J. Young.—p. 748.
Lung Abscess as Complication of Electroshock Therapy. S. Kwalwasser, R. R. Monroe and J. F. Neander.—p. 750.
Postgraduate Training in Child Psychiatry. K. Cameron.—p. 755.
Neuropsychiatry in Michigan (II): Brief Review for Those Attending 1950 Meeting of American Psychiatric Association. T. J. Hehlt. —p. 761.
*Preliminary Report on Effect of Drinking in 25 Cases of Epilepsy. D. Geddes.—p. 787.

Drinking of Alcohol and Epilepsy.—According to Geddes it has been recognized that convulsive seizures occur in a significant percentage of cases of chronic alcoholism. These patients were alcoholic addicts long before their seizures

developed. Alcoholism was considered to be one of the prominent predisposing factors in epilepsy, particularly in middle aged persons. In the majority of 25 adults with idiopahtic epilepsy Geddes found that alcohol had little or no effect on the frequency or severity of their seizures. Although the convulsive thresholds of these patients must be considerably lowered by their disease, the amount of alcohol that they take in the course of regular moderate drinking is apparently insufficient to produce seizures in most cases. This may be partly due to the fact that as the patient grows older the convulsive threshold rises. In most instances moderate drinking did not interfere with control of the seizures by medication.

American Review of Tuberculosis, New York

61:443-596 (April) 1950

Role of Dual Reading in Mass Radiography. J. Yerushalmy, J. T. Harkness, J. H. Cope and B. R. Kennedy.—p. 443.
Friedlander's Pneumonia. R. H. Wylie and P. A. Kirschner.—p. 465.
Acute Lung Abscess. W. Weisel, F. Raine and G. C. Owen.—p. 474.
Resistance of Tubercle Bacilli to Chemotherapeutic Agents: Review of Basic Biological Considerations. D. Yegian and R. J. Vanderlinde.—p. 483.
Experimental Studies on Pathogenesis and Prognosis of Renal Tuberculosis. A. Sporer and M. E. Greenberger.—p. 508.
*Streptomycin Treatment of Genitourinary Tuberculosis. J. K. Lattimer, J. B. Amberson and S. Braham.—p. 518.
Effect of Streptomycin on Morphology of Tuberculous Lesion. M. C. Silverthorne and G. Silverman.—p. 525.
*Pathology of Pulmonary Tuberculosis: As Modified by Streptomycin Therapy. H. W. Mahon.—p. 543.
Effect of Intravenous Tuberculin Injections on Subsequent Tuberculin Skin Reactions in Hypersensitive Rabbits. C. Sandage and J. M. Birkeland.—p. 556.
Distribution of Iron in Tuberculous Granulation Tissue. G. Gomori.—p. 560.
Methods for Isolating Tubercle Bacilli. E. G. Roberts, J. L. Wallace and H. Ehrlich.—p. 563.
Direct Method for Determination of the Sensitivity of Tubercle Bacilli to Streptomycin. G. P. Youmans, A. Ibrahim, J. Sweany and H. C. Sweany.—p. 569.
Plate Method for Determination of Streptomycin Sensitivities of Mycobacterium Tuberculosis. B. H. Johnson.—p. 578.
Comparison Between Aneroid Spirometer and Water Spirometer. D. H. Cohen.—p. 582.

Streptomycin in Genitourinary Tuberculosis.—Lattimer and co-workers treated 253 patients with genitourinary tuberculosis with streptomycin at the Veterans Administration Hospital, Bronx, N. Y. Intramuscular injections of 0.3 Gm. of the drug every four hours, day and night, for one hundred and twenty days appeared to be the most effective dosage regimen against active ulcerating renal lesions. Streptomycin alone was sufficiently effective to be useful against bilateral, solitary and selected small unilateral tuberculous renal lesions. Small renal lesions which were discovered by bacteriologic examination of urine before there was a visible pyelographic lesion responded better than large lesions which were definitely visible in the pyelogram. Bacilli disappeared from the urine in about 25 per cent of the patients after the 2 Gm.-120 day treatment, but even patients whose urine remained positive for tubercle bacilli were often improved clinically. Superficial ulcerations and edema of the bladder and ureters responded well. Prostatic and epididymal tuberculosis did not respond sufficiently well to merit treatment with streptomycin. Some degree of permanent damage to the vestibular apparatus was observed in all patients, but with corrective exercises the patients compensated adequately for this loss. The development of bacterial resistance to the drug and the presence of necrotic, caseous or fibrous tissue were the chief factors limiting the effectiveness of streptomycin.

Histopathologic Changes in Lungs After Streptomycin.—Mahon performed necropsy in 56 cases of pulmonary tuberculosis treated with streptomycin. Thirteen of these cases were generalized miliary tuberculosis. Observations on the effect of streptomycin on the tuberculous disease in the lungs of the 56 patients and in 55 specimens of lungs, lobes or segments which were removed surgically from patients treated with streptomycin, revealed that the cases of hematogenous miliary tuberculosis of the lungs gave the most impressive evidence of the drug's efficacy. A particular type of scar was seen replacing the miliary tubercle in the tissues of patients who had responded clinically to streptomycin. The development of these scars could be followed. Failure of such scars to appear in the fresh spreads of cases of relapse of the miliary disease usually indicated that drug-resistant tubercle bacilli had become predominant. The shortest period of time required for the scars to develop was twenty-two days after the start of therapy. Fresh massive exudative lesions were not represented except by their residuals of cavities, fibrocaseous nodules, tuberculoid granulomas, nondescript fibrotic scarring and focal collections of lymphocytes. The effects of streptomycin were indefinite in chronic fibrocaseous and fibrocavernous tuberculosis. The continuation of streptomycin treatment after the bacilli become resistant to the drug in vitro had no further effect in restraining the natural progress of the disease. The natural healing of tissue was not effected by streptomycin except indirectly by reducing the bacillary population and thus accelerating the repair process. The sarcoid type of tubercle present in the lymph nodes of the surgical specimens suggested a streptomycin effect. The lack of active endobronchial tuberculosis in the surgical specimens and the presence of an abortive type of tubercle in the bronchial walls might be considered to represent an effect of the antibiotic. Streptomycin appeared to have a definite effect on thin-walled cavities in promoting a healthy granular lining.

Archives of Pathology, Chicago

49:367-502 (April) 1950

Carcinoma of Head of Pancreas: Effects of Obstruction on Ductal and Acinar Systems. E. A. Haunz and A. H. Baggenstoss.—p. 367.
Generalized Aspergillosis: Report of Case. R. H. Grekin, E. P. Cawley and B. Zheutlin.—p. 387.
Lesions of Galactose Diabetes: Pathologic Observations. L. S. Bell, W. C. Blair, S. Lindsay and S. J. Watson.—p. 393.
Mixed Tumors of Thymus: Criteria for Their Differentiation and Their Radiotherapeutic Response. S. J. Eisenberg and P. F. Salvesen.—p. 404.
*Evidence for Inflammatory Basis of Coronary Arteriosclerosis in the Young. O. Saphir and I. Gore.—p. 418.
Basic Histologic Lesions of Magnesium Deficiency in Rat. E. Lowenhaupt, M. P. Schulman and D. M. Greenberg.—p. 427.
*Coronary Arteriosclerosis of Birds: Comparison of Spontaneous and Experimental Lesions. S. Lindsay and I. L. Chaikoff.—p. 434.
Iodized Poppyseed Oil Granuloma: Report of Case. H. C. Fortner and J. S. Miles.—p. 447.
Vascular Lesions in Lipid Pneumonia (Due to Liquid Petrolatum): Pathogenesis and Significance. E. V. Hastings.—p. 453.
Anemic Infarct of Liver. S. Loaner, B. W. Volk and M. Jacobi.—p. 461.
Incidence of Gangrene of Extremities in Nondiabetic and in Diabetic Persons. E. T. Bell.—p. 469.
Factors Influencing Formation of Cartilage in Healing of Experimentally Induced Fractures. W. E. Luedtke and D. M. Angevine.—p. 474.
Rickettsial Diseases: Discovery and Conquest: Howard Taylor Ricketts Award Lecture. R. M. Wilder.—p. 479.

Coronary Arteriosclerosis in the Young.—Saphir and Gore studied the cardiac vessels of 13 soldiers between the ages of 18 and 29 who died suddenly of severe coronary heart disease. The vascular lesions observed in the hearts of some of these were associated with the residue of an old inflammatory process. In 6 there were lesions of the small intramyocardial arteries of the type considered characteristic of chronic rheumatic carditis, though other residua of rheumatic infection were observed in only 2. In 3 of these 6 and in 4 of the remaining cases old inflammatory changes were present about the large coronary arteries. Inflammation involving arteries may result in reactive intimal thickening which in its late stages cannot be distinguished from arteriosclerosis. It is possible that the vascular lesions in these cases may have been a consequence of a primary inflammatory process.

Arteriosclerosis of Birds.—Lindsay and Chaikoff compared the lesions of coronary arterial disease occurring spontaneously in birds with those produced experimentally. Three groups of birds, each consisting of 12 white leghorn cockerels aged 33 months, were studied. Lesions were induced in the coronary arteries of one group by lipemias of endogenous origin (injection of diethylstilbestrol) and of another group by lipemias of exogenous origin (cholesterol feeding), while the third group served as control. A spontaneous coronary arterial lesion in the form of a small intimal fibrous plaque entirely free of lipids was observed in 4 of the 12 control birds. This spontaneous intimal lesion was not observed in the birds treated with diethylstilbestrol. In these birds the coronary vascular lesions were confined entirely to the media and consisted of lipids only. Various coronary vascular lesions were observed in the cholesterol-fed birds. Initial medial depositions were

observed in a few instances, but the disease appeared to be intimal in origin in the majority. No evidence was obtained to support the view that a medial degenerative lesion precedes the appearance of intimal disease in the normal control, the diethylstilbestrol-treated or the cholesterol-fed bird.

Archives of Surgery, Chicago

60:635-836 (April) 1950

Effect of Transplantation of Bone Marrow into Irradiated Animals. P. E. Rekers, M. P. Coulter and S. L. Warren.—p. 635.
Anomalies of Gallbladder: Report of Case of Left-Sided Floating Gallbladder. C. W. Mayo and D. B. Kendrick Jr.—p. 668.
'Heterotopic Pancreatic Tissue: Report of Case Presenting Symptoms of Ulcer and Review of Recent Literature. J. M. Busard and W. Walters.—p. 674.
'Physiologic Amputation by Tourniquet and Refrigeration: Treatment of Infected Gangrenous Extremity. A. Large.—p. 683.
'Intussusception Associated with Aberrant Pancreatic Tissue: Report of Case and Review of Literature. J. L. Keeley.—p. 691.
Mesenteric Cysts: Report of 3 Cases, in 1 of Which Calcified Cyst Was Present. W. E. Burnett, G. P. Rosemond and R. M. Bucher.—p. 699.
Histologic Localization of Absorbed Radioactive Iodine in Some Human Thyroid Diseases. F. L. Kreutzer, E. R. Miller, M. H. Soley and S. Lindsay.—p. 707.
Volvulus of Colon. W. H. Gerwig Jr.—p. 721.
Solitary Diverticulum of Cecum. M. E. Costin and E. A. Gaston. —p. 743.
Duplication of Urethra: Report of 2 Cases and Summary of Literature. R. E. Gross and T. C. Moore.—p. 749.
Effect of Variations in Amount of Mercury on Speed of Intestinal Intubation. M. O. Cantor.—p. 762.
Actinomycosis of Knee: Report of Case. G. W. Shelton, C. Z. Garber and A. DeF. Smith.—p. 771.
Solitary Cutaneous and Subcutaneous Leiomyomas. W. M. Christopherson.—p. 779.
Delayed Subcutaneous Beryllium Granuloma. E. A. Shorten and H. K. Giffen.—p. 783.
Use of Oxycel® Gauze in Treatment of Persistent Fistulas. S. A. Rosenburg.—p. 787.
Synthetic Adhesives—New Hemostatic Agent: Third Report. M. L. Lowry.—p. 793.
Rhabdomyosarcoma of Thigh: Report of Case. L. T. Palumbo, M. Leibowitz and T. E. Corcoran.—p. 806.
Surgical Procedures for Pancreatic Lesions: Review of Pancreatic Surgery. R. F. Bowers.—p. 817.

Heterotopic Pancreatic Tissue Causing Ulcer Symptoms.—Busard and Walters report that a man aged 59 complained of pain in the epigastrium and the left upper quadrant of the abdomen. For years he had had an "acid condition" of his stomach, relieved by ingestion of sodium bicarbonate or milk. In 1929 his physician had diagnosed the condition as duodenal ulcer associated with pylorospasm. He was placed on a strict ulcer regimen and was free from pain until three years before his entry to the hospital (1944), when he noted a return of the intermittent gnawing epigastric distress. This came on two or three hours after meals and was relieved by taking food and antacids. In 1946 a diagnosis of chronic appendicitis was made, but operation was not performed. In July 1947 roentgenologic examination showed a duodenal ulcer and a prepyloric filling defect on the greater curvature. In November 1947 roentgenoscopy revealed a normal duodenum, but the gastric defect remained. The patient remained symptom free but was sent to the clinic because of the persistence of the prepyloric defect. At operation a submucosal tumor was found on the greater curvature of the stomach, 2.5 cm. above the pylorus. There was thickening of the pyloric sphincter and the musculature of the lower third of the stomach, presumptive evidence that there had been prolapse of the tumor through the pylorus, producing intermittent pyloric obstruction. Segmental excision of this region was performed, and the anterior portion of the pyloric sphincter was divided. The duodenum as was and the lower third of the stomach were examined for an ulcer, but none was found. Reconstruction by gastroduodenostomy of the Heineke-Mikulicz type was performed. The gallbladder emptied readily, and no stones were palpated. The liver was normal. The tumor tissue from the stomach proved to be a pancreatic rest (so-called adenomyoma). Leading down to this rest were two mucosal diverticula. The postoperative convalescence was uneventful. The incidence of heterotopic pancreatic tissue has been estimated at between 0.55 and 5.6 per cent in necropsy material and as occurring in 1 in 160 to 600 operations. The total number of reported cases of heterotopic pancreatic tissue is now 543.

Physiologic Amputation by Tourniquet and Refrigeration.—Large says that with the introduction of refrigeration anesthesia it was hoped that the problem of amputation for moist gangrene had been solved. This procedure involved cooling the involved extremity and applying a tourniquet, with resultant elimination of absorption from the gangrenous area. Later, amputation through the cooled tissues was performed without further anesthesia. Certain shortcomings of the method soon became apparent. Although the operative mortality was decreased to below 20 per cent, the wounds healed slowly and infection was frequent. The effects of cooling on wound healing and on the spread of infection were studied in dogs. The benefits of refrigeration, namely, anesthesia and elimination of absorption from the part could be obtained by cooling a gangrenous extremity and placing a tourniquet around the cooled area. The deleterious effect of prolonged cooling could be avoided by removing all the refrigerated tissue. A method of physiologic amputation by tourniquet and refrigeration was developed for clinical use. Ice and the tourniquet were applied to a gangrenous limb below the site of proposed amputation. It was hoped that this would permit the patient's general condition to improve sufficiently so that amputation could be undertaken above the ligated and cooled area without undue risk. Twenty-nine amputations in 27 patients have been performed by this method. The majority of the patients were old and debilitated and had severe arteriosclerosis, often with diabetes mellitus, and all had some evidence of toxic absorption from the extremity. Every patient improved with physiologic separation of the gangrenous area by tourniquet and refrigeration and tolerated spinal or general anesthesia and operation itself without shock or other difficulty. The rationale of physiologic amputation by tourniquet and refrigeration rests on the knowledge that the moment a tourniquet is applied to a limb, amputation is in reality performed as far as the constitutional effects are concerned. Refrigeration is employed only to permit painless application of the tourniquet and to prevent decomposition of already dead tissue with possible extension of the gangrenous process by continuity. Clinical experience with physiologic amputation by the tourniquet and refrigeration has been most gratifying.

Intussusception Associated with Aberrant Pancreatic Tissue.—Keeley reports that a boy 3½ years of age was hospitalized because of nausea, vomiting and abdominal pain of sixty-five hours' duration. Barium solution, given by rectum, was seen under the fluoroscope to pass normally through the colon until it reached a point proximal to the hepatic flexure. There the solution stopped. After approximately a minute, the column of barium slowly progressed toward the cecum, filling it normally and passing into the terminal portion of the ileum. The ileum was incompletely filled, which suggested an ileoileal intussusception. This diagnosis was confirmed when the roentgenograms revealed the "pitchfork" sign. After the dehydration was corrected, the abdomen was opened and an ileoileal intussusception was disclosed. This was reduced by "milking" the terminal portion of the ileum from below upward. The intussusceptum was found to be the site of a subserous hemorrhage. At the head of the intussusceptum there was a nubbin of tissue about 1 cm. in diameter. The involved ileum was resected and end to end anastomosis was performed, approximately 22 cm. of ileum having been resected. The patient recovered. Microscopic examination of the nodule found at the head of the intussusception revealed pancreatic tissue. This appears to be the seventh reported instance of intussusception with intramural aberrant pancreatic tissue as the only regional abnormality.

Arizona Medicine, Phoenix

7:1-96 (March) 1950

Arizona Scorpion Problem. H. L. Stahnke.—p. 23.
Lower Nephron Nephrosis. L. B. Baldwin.—p. 29.
Pregnancy Following Patent Ductus Arteriosus Ligation. E. F. Boyd Jr. and E. F. Boyd Sr.—p. 35.
Humped Nose. J. E. Brooks.—p. 39.

7:1-72 (April) 1950

The Most Neglected Aspect of Chemotherapy. R. R. Mellon.—p. 19.
Menstrual Irregularities. E. S. Taylor.—p. 25.
Ménière's Syndrome; Disturbances of Vestibular Apparatus—Preliminary Report. B. W. Saylor.—p. 29.

Bulletin New York Academy of Medicine, New York

26:205-286 (April) 1950

SYMPOSIUM ON PRESENT STATUS OF CORTISONE AND ACTH

Effects of Cortisone and ACTH in Rheumatoid Arthritis. R. H. Freyberg.—p. 206.
*Effect of Cortisone and ACTH on Rheumatic Fever. C. McEwen, J. J. Bunim, J. S. Baldwin and others.—p. 212.
*Treatment of Disseminated Lupus Erythematosus with Cortisone and Adrenocorticotropin. G. Baehr and L. J. Soffer.—p. 229.
Use of ACTH and Cortisone in Neoplastic Disease. O. H. Pearson, L. P. Eliel and T. R. Talbot Jr.—p. 235.
Physiology of Pituitary-Adrenal System. J. A. Russell.—p. 240.
Effect of ACTH and Cortisone on Connective Tissue. C. Ragan, E. L. Howes, C. M. Plotz and others.—p. 251.
Relationship of Adrenal Cortical Activity to Immune Responses. E. E. Fischel.—p. 255.

Cortisone and Pituitary Adrenocorticotropic Hormone (ACTH) in Rheumatic Fever.—McEwen and co-workers report 2 girls aged 9 years and 1 boy aged 8 years with rheumatic fever and heart disease. One of these patients was given pituitary adrenocorticotropic hormone (ACTH) alone, the 2 others received cortisone first and the hormone after an intervening period without medication. The earlier observations of Hench and others regarding the effect on the fever, polyarthritis and anemia were confirmed in these children. The erythrocyte sedimentation rate and the fibrinogen concentration in the blood fell in a roughly parallel fashion as cortisone or pituitary adrenocorticotropic hormone was administered. The serum gamma globulin, which was increased in 2 patients before the treatment, became normal during therapy. The "C" reactive protein also fell to normal as the patients improved, as did the antistreptolysin O titer in 2 of the patients. Changes in sodium, potassium, chlorides, carbon dioxide combining power, uric acid, nonprotein nitrogen, uric acid-creatinine ratio, and dextrose followed the patterns observed in normal persons and patients with other diseases who were receiving cortisone and pituitary adrenocorticotropic hormone. The effect on rheumatic carditis was less definite. Two of the patients with active carditis of two and one-half and nine months' duration showed no immediate improvement in cardiac failure. The third patient, treated on the sixth day of rheumatic fever, showed striking improvement in carditis and apparently was completely well after forty-four days of treatment. Experience gained in the study of 11 additional patients with rheumatoid arthritis or scleroderma who were given cortisone or the hormone or both amply confirmed the effect of cortisone and pituitary adrenocorticotropic hormone on fever, polyarthritis and the general toxicity of the disease. Sufficient evidence has accumulated to warrant the hope that the two drugs do benefit rheumatic carditis, but further experience is required for final judgment.

Cortisone and Pituitary Adrenocorticotropic Hormone (ACTH) in Lupus Erythematosus.—Baehr and Soffer treated 5 patients extremely ill with disseminated lupus erythematosus with cortisone and pituitary adrenocorticotropic hormone (ACTH). The required daily therapeutic dose for severer cases of long standing proved to be 150 to 200 mg. of cortisone daily in four divided doses by the intramuscular route or about 100 mg. of pituitary adrenocorticotropic hormone per day, also administered intramuscularly in four divided doses. The patients who were almost moribund responded to the treatment within forty-eight hours with a feeling of well-being, improvement in strength and amelioration of arthralgia. The temperature usually came down to normal by the fourth day of treatment. The characteristic erythema disappeared within ten days, and the patients appeared to be on the road to convalescence. After two or more weeks of treatment with cortisone at maximum doses the amount of the drug was gradually reduced every three or four days. The daily maintenance dose required to hold the gain was between 50 and 100 mg. Reduction below that amount or complete withdrawal of the drug resulted in prompt recurrence of the disease within a few days. It seemed that cortisone had partially suppressed adrenal cortical function and, therefore, after the disease had been controlled clinically by cortisone, the patients required a reactivation of adrenal cortical function by stimulation with the pituitary hormone if relapse was to be prevented. The maintenance dose of cortisone was replaced with an equivalent amount of 75 to 100 mg. of pituitary adrenocorticotropic hormone daily for four or five days; the daily amount was reduced by slow stages during the succeeding four to six weeks until the patient's own adrenals had assumed the full load. Cortisone and pituitary adrenocorticotropic hormone seem to prevent or arrest the abnormal enzymatic processes initiated in mesenchymal cells by an unknown causative factor. Although the disease was arrested by cortisone—pituitary adrenocorticotropic hormone therapy in all patients, the leukopenia persisted and the erythrocyte sedimentation rate remained accelerated. The dramatic improvement of the disease under therapy can be interpreted only as a remission. Recurrences that will require repetition of the treatment may be anticipated. The administration of these hormonal preparations in the required doses is accompanied by serious hazards such as congestive heart failure and acute pulmonary edema. The extremely potent drugs should be used at present on patients with disseminated lupus erythematosus only in a hospital with a specially trained staff and with facilities for accurate chemical and physiologic measurements.

Canadian Medical Association Journal, Montreal

62:317-420 (April) 1950

Adequate Care of Premature Infant. P. H. Spohn.—p. 317.
Trichlorethylene as Inhalation Anaesthetic and Analgesic. C. L. Hewer. —p. 324.
Obstetrical Analgesia with Trilene Inhaler. A. B. Noble and S. H. Cattanach.—p. 327.
Thyroidectomy in General Practice: Review of Cases over Period of 20 Years. R. J. Neelands.—p. 330.
Coma in the Diabetic. W. deM. Scriver.—p. 332.
Status of Radiation Therapy in Carcinoma of Cervix. E. Perceival and A. D. Campbell.—p. 335.
Problem of Specific Therapy in Cardiovascular Syphilis. R. R. Forsey. —p. 339.
Principal Patterns of Cardiac Pain Related to Arteriosclerotic Coronary Artery Disease. H. N. Segall.—p. 341.
Evaluation of Vaginal Cytologic Smears in Diagnosis of Uterine Cancer. A. A. Earn and D. W. Penner.—p. 344.
Hereditary Cyanosis. D. M. Baltzan and H. Sugarman.—p. 348.
Infectious Diarrhoea of Infancy. H. W. Price.—p. 351.
Clinical Considerations in Acute Pancreatitis. N. H. Gosse.—p. 354.
The Older Worker—His Preparation for Retirement. A. N. Reid. —p. 358.
Addison's Disease in Tuberculosis. R. W. Male.—p. 362.
Anaesthesia in Repair of Hernia. E. B. Campbell.—p. 364.
Fusion of Subastragaloid Joint. S. V. Railton.—p. 367.
Fenestration of Internal Ear with Analysis of 33 Cases. B. W. Tanton. —p. 368.

Cancer, New York

3:189-376 (March) 1950. Partial Index

Evaluation of Pelvic Exenteration Operation. L. Parsons and J. W. Bell. —p. 205.
Carcinoma of Large Bowel: Analysis of Clinical Features in 478 Cases, Including 88 Five-Year Survivors. J. W. Buser, J. B. Kirsner and W. L. Palmer.—p. 214.
Primary Carcinoma of Lung: Clinical Study of 1,203 Cases. I. M. Ariel, E. E. Avery, L. Kanter and others.—p. 229.
Re-Evaluation of Solitary Plasma-Cell Myeloma of Bone. W. M. Christopherson and A. J. Miller.—p. 240.
Treatment of Multiple Myeloma with Urethane. W. J. Harrington and W. M. Mahoney.—p. 253.
Effect of Adetylic Acid Therapy upon Pruritus Due to Hodgkin's and Other Diseases. A. Rottino.—p. 272.
Aneurysmal Bone Cyst: Pathological Entity Commonly Mistaken for Giant-Cell Tumor and Occasionally for Hemangioma and Osteogenic Sarcoma. L. Lichtenstein.—p. 279.
Effects of Urine Extracts from Cancer Patients on Rat Gonads and Spleen. J. C. Wilt and D. Nicholson.—p. 290.
*Malignant Melanoma in Infant. H. W. Dargeon, J. W. Eversole and V. Del Duca.—p. 299.
Adenoma of Liver, Mixed Type (Hamartoma): Report of 2 Cases. S. Kay and P. C. Talbert.—p. 307.
Uptake of Labeled Glycine by Normal and Cancerous Tissues in Rat. A. C. Griffin, S. Bloom, L. Cunningham and others.—p. 316.
*Experimental Production of Thyroid Tumors in Rat Exposed to Prolonged Treatment with Thiouracil. W. L. Money and R. W. Rawson. —p. 321.
Distribution of Radioactivity in Rats and Man: After Intravenous Administration of Diethyl B-Radioiodoethyl Amine Hydrochloride and of Radioactive Sodium Iodide. A. M. Rutenburg, O. M. Friedman and A. M. Seligman.—p. 336.

Malignant Melanoma in Infant.—Dargeon and his associates report the case of a woman who had been born with a pigmented area on the leg. The area became darker and somewhat larger when she was 18. Six years later she again noted

a change in the size and color of the nevus. When the lesion was excised microscopic examination revealed a malignant melanoma. About eighteen months later a painful swelling developed in her right groin. This was treated in November 1945 by high voltage roentgen therapy and excision. She died June 26, 1947, aged 28, four days after the premature delivery of a boy. At the age of 7½ months the boy had a left-sided facial palsy, a swelling anterior to the left ear and a small node just below it. Biopsy of a small mass in the anterior part of the ear canal revealed a malignant growth. Later, the left preauricular node was excised and a malignant melanoma was diagnosed. The boy died when he was 11 months of age. Necropsy revealed metastatic tumor cells in the lungs, liver, kidney and the lymph nodes of the lesser omentum. The child's tumor probably developed as the result of transplacental transmission. The widespread metastasis, involving the uterus, that occurred in the mother during her pregnancy makes placental involvement a possibility. The viscus chiefly affected in this baby was the liver, which is the first organ in fetal life to receive quantities of placental blood.

Thyroid Tumors in Rats Exposed to Prolonged Treatment with Thiouracil.—Money and Rawson studied the microscopic changes produced by prolonged stimulation of the thyroid in male rats with thiouracil and dibenzanthracene. The thyroid tumors were essentially the same whether produced by thiouracil alone or by the combined treatment of thiouracil and dibenzanthracene. The main types were (1) intrafollicular growths and (2) thyroid adenoma. Microscopic examination of these hyperstimulated thyroids revealed nearly all the types of benign tumor found in the human thyroid. The authors think that most of the tumors produced by thiouracil treatment are benign. The apparent invasion of the thyroid capsule or blood vessels probably does not in itself constitute a malignant condition. Such glands, when transplanted to other rats or to the anterior chamber of the eyes of guinea pigs, do not continue to grow. These animals are exposed to two types of physiologic abnormalities, (1) a deficiency in iodine and (2) overstimulation with the thyroid-stimulating hormone. It is possible that either or both of these is responsible for the formation of tumors.

Electroencephalography and Clin. Neurophys., Boston

2:1-124 (Feb.) 1950. Partial Index

Basal Lead Studies in Epileptic Automatisms. P. D. MacLean and A. P. Arellano Z.—p. 1.
Metrazol Activation of Seizure Discharges in Epileptics with Normal Routine Electroencephalograms. J. K. Merlis, G. F. Henriksen and C. Grossman.—p. 17.
Thalamic Recordings in Man with Special Reference to Seizure Discharges. E. A. Spiegel and H. T. Wycis.—p. 23.
Augmentation of Evoked Electro-Cortical Activity During Spindle Bursts. G. Moruzzi, J. M. Brookhart, W. T. Niemer and H. W. Magoun.—p. 29.
Thalamocortical Activity During Spreading Depression. G. L. Winokur, S. A. Trufant, R. B. King and J. L. O'Leary.—p. 79.

Endocrinology, Springfield, Ill.

46:135-260 (Feb.) 1950

Alloxan Administration in Guinea Pig: Study of Histologic Changes in Islands of Langerhans, Blood Sugar Fluctuations, and Changes in Glucose Tolerance. D. D. Johnson.—p. 135.
Effects of Pteroylglutamic Acid Deficiency and Pteroylglutamic Acid Replacement on Endocrine Glands of Immature Chick. H. N. Marvin, J. R. Totter and P. L. Day.—p. 156.
Observations on Histophysiology of Adrenal Gland of Golden Hamster. M. Alpert.—p. 166.
Differential Mechanisms by Which Picrotoxin and Copper Acetate Induce Ovulation in Rabbit. C. H. Sawyer and J. E. Markee.—p. 177.
Partial Maintenance of Adrenal Cortex by Anterior Pituitary Grafts in Fed and Starved Guinea Pigs. M. Schweizer and M. E. Long.—p. 191.
Colorimetric Method Specific for Dehydroisoandrosterone and Its Application for Quantitative Estimation in Pure Solutions and in Urinary Extracts. L. Hansen.—p. 207.
Excretion of Posterior Pituitary Antidiuretic Hormone in Urine and Its Detection in Blood. R. G. Ames, D. H. Moore and H. B. van Dyke.—p. 215.
Resumption of Function of Autoplastic Adrenocortical Transplants to Dorsal Musculature in Rats. E. L. Konrad and L. C. Wyman.—p. 228.
Failure of Salt Replacement Therapy in Adrenalectomized Recently Captured Wild Norway Rats. C. P. Richter, P. V. Rogers and C. E. Hall.—p. 233.
Alkaline Phosphatases in Various Tissues of Rat During Alarm-Reaction. M. Herlant and P. S. Timiras.—p. 243.
Effects of Stilbestrol on Weight and Ascorbic Acid Level of Guinea Pig Adrenals. E. Nadel, E. S. Josephson and A. S. Mulay.—p. 253.

Florida Medical Association Journal, Jacksonville

36:531-598 (March) 1950

Progress in Tuberculosis Control in Florida. C. M. Sharp.—p. 547.
Dermatitis Due to Wearing Apparel. G. B. Taylor.—p. 551.
Role of Roentgen Ray in Diagnosis of Pulmonary Diseases: Critique. M. Kovnat and J. Reiss.—p. 554.
Tick Paralysis: Report of Case from Florida. A. W. White and E. V. Anderson.—p. 561.

Southern Surgeon, Atlanta, Ga.

16:229-328 (March) 1950

Chronic Benign Suppurative Disease of Lungs. W. B. Condon and F. R. Harper.—p. 229.
Diagnosis of Obstructive Jaundice. G. Y. Graves.—p. 240.
Surgical and Technical Aspects in Usage of Wire Sutures. G. O. Dean.—p. 250.
Lobectomy in Treatment of Pulmonary Tuberculosis: Preliminary Report. J. M. Salyer and J. H. Forsee.—p. 262.
Botryomycosis and Actinomycosis of Intestine Appearing as Foreign Body Granuloma. P. Kimmelstiel.—p. 270.
Pulmonary Embolism by Amniotic Fluid: Review of Literature and Report of Additional Proved Case. W. W. Bolack.—p. 281.
Colostomy Closure: Experiences Gained in Management and Closure of Colostomies During World War II. D. C. Robertson.—p. 285.
Mucinous Adenocarcinoma of Urinary Bladder. C. P. Armstrong and H. C. Harlin.—p. 297.

U. S. Armed Forces M. J., Washington, D. C.

1:257-376 (March) 1950. Partial Index

Malignancies of Colon: Discussion of Problems. I. S. Ravdin.—p. 257.
Malignant Neoplasms of Skin. R. E. Coker Jr.—p. 266.
Carcinoma of Lung: Report of Case Simulating Pleural Mesothelioma. L. W. Fix.—p. 269.
Thyroid Cancer in Young Adults: Report of 4 Cases. R. B. Strother and L. W. Fix.—p. 275.
Administration of Procaine Intravenously: V. Medical Conditions. H. K. Pedigo.—p. 280.
Combined Coarctation and Rupture of Aorta. A. Brody and H. Hamperl.—p. 284.
Renal Infarction: Report of 2 Cases. U. L. Meeter and J. W. Schwartz.—p. 292.
Lower Nephron Nephrosis: Report of 2 Cases Treated with Intravenous Procaine. A. C. Abernethy, A. J. Wilets and D. C. Beer.—p. 296.
Physiological Effects of High Altitude Flying. A. A. Towner.—p. 317.
Laelaptid Mites as Disease Vectors. H. L. Keegan.—p. 321.
Insulin Atrophy of Subcutaneous Fat: Report of Case. K. V. Kaess.—p. 325.
Thiomerin: Mercurial Diuretic for Subcutaneous Administration. D. E. Billman, H. R. Cooper and R. C. Parker Jr.—p. 332.

Western J. Surg., Obst. & Gynecology, Portland, Ore.

58:89-136 (March) 1950

*Benign Fibrosis of Sphincter of Oddi: Report of 8 Cases. J. P. Trommald and D. B. Seabrook.—p. 89.
Surgery of Pancreas. H. S. Chapman.—p. 95.
Surgical Significance of Nonvisualizing Gallbladder. R. B. Henley and E. G. Clausen.—p. 107.
Pregnancy and Sickle Cell Anemia: Case Report. P. J. Lipsett and L. Dickstein.—p. 110.
Problem of Adequate Therapy for Varicose Veins. New Procedure. T. B. Mastell.—p. 112.
Dysgerminoma. G. N. Rotton and D. V. Trueblood.—p. 116.
Hunner Ulcer: Report of Cases. T. O. Powell.—p. 118.
Ruptured Heterotopic Pregnancy. G. Q. Lee.—p. 130.

Benign Fibrosis of Sphincter of Oddi.—Nonmalignant obstructions of the sphincter of Oddi are usually attributed to stone or spasm, but Trommald and Seabrook say that fibrosis at the papilla is a third cause which is not frequently recognized. They observed 8 such cases. Fibrosis of the sphincter of Oddi appears to be a disease mainly of patients in the sixth and seventh decades. The youngest of the 8 patients was 46 and the oldest 80, the average being 60. Even patients who were poor surgical risks because of advanced age and concomitant degenerative disease seemed to tolerate the operation well. In cases 1, 4 and 8 the severity of the fibrosis had reduced the opening of the papilla to pinpoint size. In cases 1 and 2 the fibrotic sphincter could not be distinguished from stone in the cholangiograms. All the patients were relieved of symptoms following transduodenal sphincterotomy. The authors believe that a transduodenal sphincterotomy should be performed when it is not possible to pass a 3 mm. dilator into the duodenum, assuming that no malignant lesion is involved.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted. Single case reports and trials of new drugs are usually omitted.

British Journal of Dermatology and Syphilis, London

62:105-150 (March) 1940

Pseudo-Tuberculoma Siliceticum: Form of Cutaneous "Sarcoid." J. Sommerville and J. A. Milne.—p. 105.
Boils: Epidemiological Survey. G. P. B. Whitwell and I. Sutherland. —p. 109.
Phagedenic and Gangrenous Ulceration of Skin Complicating Ulcerative Colitis (Phagedena Geometricum). B. Russell.—p. 114.
Ulcus Migrans. A. R. H. Hicks.—p. 124.
Is Psoriasis a Bacterial Allergy? K. A. Baird.—p. 129.

British Journal of Ophthalmology, London

34:129-200 (March) 1950. **Partial Index**

Nervous System in Visual Adaptation. L. C. Thomson.—p. 129.
Action of Eserine upon Eye Following Use of Atropine. C. R. S. Jackson.—p. 156.
New Concepts Regarding Anterior Drainage of Eye. P. Weinstein. —p. 161.
Lability Test. T. L. Thomassen and W. Leydhecker.—p. 169.
White Rings in Cornea. S. J. H. Miller and W. H. Gordon.—p. 176.
Induced Pupillary Oscillations. F. W. Campbell and T. C. D. Whiteside.—p. 180.

British Medical Journal, London

1:503-560 (March 4) 1950

Medicine in Modern State. H. Platt.—p. 503.
Devices for Protection of Worker Against Injury and Disease. D. Hunter.—p. 506.
Oral Thyroxine in Treatment of Myxoedema. F. D. Hart and N. F. Maclagan.—p. 512.
Prothrombin Estimation and Dicoumarol Therapy. M. Tochey. —p. 518.
Iodine and Gastric Function. G. Papayannopoulos.—p. 520.
Hypersomnia Syndromes. M. N. Pai.—p. 522.
Comparison of Wassermann and Kahn Reactions. T. E. Osmond. —p. 524.

Journal of Neurol., Neurosurg. & Psychiatry, London

13:1-86 (Feb.) 1950. **Partial Index**

Cyanide Leuconcephalopathy in Rats and Observations on Vascular and Ferment Hypotheses of Demyelinating Diseases. C. E. Lumsden. —p. 1.
Positive and Negative Aspects of Hypothalamic Disorders. B. Brouwer. —p. 16.
Memory Studies in Electric Convulsion Therapy. M. Williams.—p. 30.
Degeneration of Primary and Secondary Sensory Neurones After Trigeminal Injection. J. Penman and M. C. Smith.—p. 36.
Effect of Diisopropylfluorophosphonate in Schizophrenia and Manic Depressive Psychosis. D. W. Rowntree, S. Nevin and A. Wilson. —p. 47.
*Value of Streptomycin in Surgical Treatment of Intracranial Tuberculoma. S. Obrador and P. Urquiza.—p. 66.
Lumbar-Puncture Headache. J. Marshall.—p. 71.
Compression of Optic Nerve by Fusiform Aneurysm of Carotid Artery. A. Ley.—p. 75.

Streptomycin in Surgical Treatment of Intracranial Tuberculoma.—Surgical treatment of intracranial tuberculoma has been unsatisfactory in the past as fatal tuberculous meningitis developed in most cases shortly after the operation. In Spain, according to Obrador and Urquiza, tuberculomas are still frequent. They represent, in the experience of these authors, nearly 10 per cent of the brain tumors and other expanding lesions. The authors report observations on the first 10 of 16 patients with tuberculoma who had a sufficiently long follow-up period. Among 4 patients treated only surgically, 1 recovered from a supratentorial tuberculoma, 2 patients died of postoperative tuberculous meningitis and 1 died of increased intracranial pressure. In another case streptomycin was not given intrathecally until after the operation; although the patient died several months later of generalized tuberculosis, the meninges were free from disease. In the next 5 cases of this series the tuberculomas were removed completely. The patients received streptomycin intramuscularly and intrathecally for two to three months afterward. The drug was given intramuscularly in daily doses of 1 Gm. for 43 to 78 days. The intrathecal injections were given either by the intraventricular or the lumbar route for 35 to 60 days after the operation, in doses from 50 to 100 mg. daily during the first four weeks of treatment and afterward every other day. All the 5 patients who received postoperative streptomycin therapy have recovered and have remained well for periods of one to over one and a half years since operation. In 4 the tuberculoma was in the posterior fossa. These results demonstrate that streptomycin has changed the outlook in the surgical treatment of intracranial tuberculoma that it is capable of preventing the postoperative spread to the meninges.

Lancet, London

1:429-476 (March 11) 1950

Undulant Fever: Neglected Problem. W. Dalrymple-Champneys. —p. 429.
*Continuous Drip Treatment of Peptic Ulcer. A. M. Clark.—p. 435.
Pheochromocytoma of Adrenal. J. N. Walton.—p. 438.
Tuberculous Sinuses Treated with Streptomycin Locally. R. T. Abern. —p. 443.
Penicillin-Resistant Staphylococci: Incidence in Relation to Length of Stay in Hospital. H. J. F. Cairns and G. A. C. Summers.—p. 446.
Pure Anti-E Antibody in Serum of Rh-Positive Woman. E. M. Steven. —p. 447.
Potassium Deficiency in *p*-Aminosalicylic Acid Therapy: Cardiac and Paralytic Effects. F. E. de W. Cayley.—p. 447.

Continuous Drip Treatment in Peptic Ulcer.—Clark believes that continuous intraesophageal drip is a satisfactory method of medical treatment of the acute and the subacute peptic ulcer, especially when there is considerable pain associated with gastric and pyloric spasm. This treatment requires least attention from the nursing staff. The constant drip keeps the gastric contents neutral throughout the 24 hours better than the intermittent feeding methods and affords the stomach maximal rest. The method is suitable for the treatment of recent hematemesis and when the general condition is poor or the patient needs building up before the operation. The best solution for the drip is fresh milk citrated with 40 grains of sodium citrate to the pint (2.59 Gm. to 500 cc.) delivered at a rate of 100 ounces (2.95 L.) in 24 hours. The next most satisfactory solution is magnesium bicarbonate in a 1:3 dilution of the British Pharmacopeia solution, with 80 ounces (2.36 L.) given in 24 hours. This has the disadvantages of being laxative and not having the nutritive value of milk. Usually its laxative action can be combatted by the addition of 15 minims (1 cc.) of opium tincture to the drip reservoir twice daily. There is no danger of alkalosis with either milk or the magnesium bicarbonate solution. Patients have no difficulty in accommodating themselves to the constant drip, provided the Ryle's tube is swallowed by mouth, the end resting in the esophagus just above the cardia.

Practitioner, London

164:193-288 (March) 1950. **Partial Index**

Psoriasis. B. Russell.—p. 197.
Problem of Acne. B. C. Tate.—p. 205.
Drug Eruptions. J. Kinnear.—p. 213.
Contact Dermatitis. H. R. Vickers.—p. 226.
Emergency Treatment of Apoplexy. G. de Takats and G. W. Graupner. —p. 242.
Artificial Pneumothorax. N. C. Oswald.—p. 249.

South African Medical Journal, Cape Town

24:141-160 (March 4) 1950. **Partial Index**

Allergic Sensitivity to Castor Bean (Ricinus Communis): South African Cases of Vasomotor Rhinitis and Bronchial Asthma Caused by Inhalation of Castor Bean Dust. D. Ordman.—p. 141.
Primary Systemic Amyloidosis with Gross Cardiac Involvement. C. R. Woolf.—p. 146.
*Antabuse: Contra-Indication to Its Use. V. P. Norman and F. Drusinsky.—p. 152.

Contraindication to Antabuse.*—According to Norman and Drusinsky the treatment of alcoholism with antabuse* (tetraethylthiuram disulfide) requires caution. Patients with diabetes are a bad risk, because the increased concentration of

acetic aldehyde in the blood may precipitate coma. The authors cite a man, aged 35, in whom a pronounced apical systolic bruit and a faint blowing aortic, diastolic murmur developed. Electrocardiography revealed evidence of a supraventricular tachycardia with slurring of the T wave in lead 2, depressed RS-T segment in lead 3 and inversion of the T wave in lead 3. Lead 4 also showed a depressed RS-T segment complex. These are all suggestive of a cardiac ischemia. Patients with demonstrable cardiac lesions and angina of effort should not be given this drug.

Thorax, London

5:1-104 (March) 1950

Collapse of Lung Associated with Primary Tuberculosis Lesions. A. M. Macpherson and V. U. Lutsyche.—p. 1.
Post-Tuberculous Broncho-Stenosis and Bronchiectasis of Middle Lobe. R. C. Brock.—p. 5.
Oesophageal Sensation After Sympathectomy. A. F. Williams.—p. 40.
Diffuse Cystic Lungs of Granulomatous Origin: Histological Study of 6 Cases. G. J. Cunningham and T. Parkinson.—p. 43.
Para-Amino-Salicylic Acid (P. A. S.) and Streptomycin in Surgical Treatment of Pulmonary Tuberculosis. G. Birath, T. Bruce, C. Crafoord and L. G. U'gafa.—p. 59.
*Congenital Cyanotic Heart Disease: Follow-Up Studies in 40 Operated Cases. J. E. Wilson.—p. 73.
Pneumonectomy in Case of Fistula Between Middle Lobe Bronchus and Middle Lobe Artery. F. Soave.—p. 90.

Results of Operation in 40 Cases of Congenital Heart Disease.—Wilson reports the results of follow-up on 40 of 63 patients operated on for congenital cyanotic heart disease at the University Hospital in Copenhagen. No case was included in which less than three months had elapsed since the operation, and only 6 were included in which there had not been at least six months' observation. Tirty-five of the 40 patients had tetralogy of Fallot; 2 patients had pulmonary stenosis with interatrial septal defect; 2 had an underdeveloped right ventricle, and 1 was thought to have aortic stenosis associated with an interatrial septal defect and a small functioning patent ductus arteriosus. Two of the 5 deaths that occurred in these 40 cases must be considered as anesthetic deaths. In assessing the results of the operation, the author attempted to view each case as a whole, with attention to improvement in color, height and weight increase, absence or sign of cardiac insufficiency as well as to the important feature of increased or unchanged exercise capacity. A final analysis revealed that the result was excellent in 8, very good in 10, good in 6, fair in 8, poor in 1 and unchanged in 2.

Medisch Maandblad, Batavia

2:353-392 (Dec.) 1949. **Partial Index**

Primary Atypical Pneumonia. V. A. M. Terwindt.—p. 355.
Treatment of Primary Lesion of Leprosy. R. Boenjamin.—p. 360.
Value of Iodobismuthomentine Preparation in Chronic Amebic Dysentery. P. J. Zuidema.—p. 375.
Choriocpithelioma Following Abortion. C. van Lankeren.—p. 379.

Treatment of Primary Lesion of Leprosy.—Boenjamin of he Institute for Leprosy Research in Batavia reports 7 patients with a solitary primary skin lesion of leprosy treated by extirpation. One of the 7 patients had a solitary elevated spot on the cheek (tuberculoid leprosy), whereas the other 6 showed flat solitary maculas with disturbed perception of temperature and pain, the surface being smooth and depigmented. The nasal secretions of all 7 patients were negative for leprosy bacilli. None of the patients showed thickening of nerves or enlarged regional lymph nodes. They had no complaints. The small lepromatous lesion was discovered in examination of the contacts of patients with leprosy, 6 of the 7 patients having had prolonged contact with such a patient. The microscopic examination of the elevated spot on the cheek showed tuberculoid changes containing some bacilli. A tuberculoid structure was found also in one of the other patients, whereas in the other 5 the removed macula-anesthetica showed round cell infiltration around the blood vessels. Three to 12 years have elapsed since removal of the primary lesion with no further symptoms having appeared. The author believes that in certain circumstances the leprosy lesion on the skin may remain localized for some years before further spreading of the bacilli along the blood vessels or lymph channels takes place.

Medizinische Klinik, Munich

45:65-96 (Jan. 20) 1950. **Partial Index**

Circulatory Effect of Injectable Honey Preparation and Its Clinical Indications. G. Schimert.—p. 65.
Fluctuations in Penicillin Content of Blood Following Use of Various Types of Penicillin With and Without Administration of Carinamide. K. M. Wolf, F. Legler and R. Hohenner.—p. 70.
Therapy in Salicyl Resistant Rheumatic Polyarthritis with Pancarditis. K.-H. Jahnke.—p. 78.
Clinical Experiences with Blood Transfusions in Typhoid and Paratyphoid. A. Lübke.—p. 81.
*Intraspinal Injection of Toxoid in Treatment of Postdiphtheritic Paralyses. W. Thiele and S. Palm.—p. 84.

Intraspinal Injection of Toxoid for Diphtheritic Paralysis.—Thiele and Palm observed that intravenous administration of toxoid exerted no influence on neurologic complications of diphtheria and failed to prevent the development of postdiphtheritic polyneuritis. Of 32 patients who, in addition to serum, were given intravenous injections of the toxoid, 11 had postdiphtheritic paralysis. Cremer observed favorable effects from intravenous toxoid injections in muscular paralyses but not in purely neural lesions. He recommended intraspinal injections of toxoid for these latter lesions in small doses (0.25 cc.) in order to avoid meningism. Thiele and Palm report 5 cases in which they studied the effects of intraspinal injections of the toxoid. Progressive disturbances in accommodation, swallowing and the respiratory muscles and other paralytic signs were the indications for the intraspinal administration of the toxoid. The favorable results obtained indicate the effectiveness of this treatment. There were no meningeal disturbances.

Presse Médicale, Paris

58:93-114 (Feb. 4) 1950

Tissue Therapy in Dermatology. J. Gaté, R. Vachon, H. Bourgeois and J. Cotte.—p. 93.
*Rana and Bufo-Reactions in Diagnosis of Pregnancy: Gonadotropic Action in European Male Frogs. H. Hinglais and M. Hinglais. —p. 95.
Two Cases of Tularemia Treated with Chloramphenicol. F. Karcher. —p. 96.

Rana and Bufo Test of Pregnancy.—The Hinglais used European male frogs and toads, Rana esculata, Rana temporaria and the common Bufos, in an investigation of the effect of the pituitary or chorionic gonadotropins on the liberation of spermatozoa appearing in the urine of these amphibia. Results were in accordance with those obtained by Galli-Mainini, who used the South-American giant toad (Bufo arenarum) in his experiments. Three cubic centimeters of the urine of a woman suspected of being pregnant were injected into the dorsal lymph sac of 3 to 5 animals. The urine of the animals was examined microscopically within one to six hours after the injection, and as a rule numerous spermatozoa were observed. The reaction is of diagnostic value only when it is identical in at least 3 animals. No false positive reactions were encountered, particularly since the gonadotropic action of epinephrine in amphibia is weak. False negative reactions are due to the reduced sensitivity of the frog to the hormonal injection during its active genital period, from March to June. A false negative reaction may also be encountered in cases in which the gonadotropic contents of the urine of the woman are low, as in the earliest stages of pregnancy or in the case of a dead extrauterine or intrauterine embryo. The authors' experiences were confirmed by other investigators in France, Belgium, Italy, Roumania and Great Britain.

Revista Clínica Española, Madrid

36:79-134 (Jan. 31) 1950. **Partial Index**

*Osteoarticular Tuberculosis: Autogenous Bone Grafts and Calcium Thionate. E. Santo Tomás Cobos.—p. 102.

Calcium Thionate in Bone and Joint Tuberculosis.—Santo Tomás Cobos reports the results of calcium thionate therapy ($S_2O_3H_4Ca$) and the use of autogenous bone grafts in bone and joint tuberculosis of 40 unselected patients. Roentgenoscopy revealed acute decalcification of the involved bones early in the course of the disease. There was pronounced functional incapacity and a high erythrocyte sedimentation rate. The involved joint was placed in a cast for three or four consecutive months and calcium thionate was given during the immobilization period and after the operation in daily intravenous

doses of 5 cc. After a rest period of 10 days the drug was given intramuscularly in doses of 5 cc. every other day up to a total of 30 injections. The erythrocyte sedimentation rate by this time was either normal or almost normal, and implantation of the bone graft was performed, after which calcium thionate, in doses of 5 cc., was given intramuscularly for a total of 40 injections. The calcium thionate therapy was continued with intervals until 100 or 150 injections had been given. Clinical, roentgenologic and functional results were excellent in all the cases.

Semaine des Hôpitaux de Paris

26:359-408 (Feb. 2) 1950

*Treatment of Abscess of Lung with Penicillin Introduced by Transpleural Puncture. P. L. Drouet, G. Faivre, G. de Ren and P. Sadoul.—p. 359.
Precision Method for Segmentary Catheterization of Lungs. P. Simonin, F. Cattenoz, Carolus and R. Senot.—p. 368.
Cavitation as Sequela of Pulmonary Abscess. P. L. Drouet, G. Faivre, G. de Ren and P. Sadoul.—p. 374.
Megaloblastic Hemopathies. P. L. Drouet, R. Herbeuval, G. Faivre and G. de Ren.—p. 379.

Penicillin in Lung Abscess.—Drouet and co-workers treated 5 patients with abscess of the lung with penicillin introduced directly by transpleural puncture. Four of the patients had a localized subcortical abscess, while the fifth had more diffuse suppuration. Transpleural puncture was performed with a needle of large caliber. The pus was aspirated, and 500,000 units of penicillin were injected into the abscess. The number of puncture-injections varied from 6 to 23. The first puncture was combined with intramuscular penicillin therapy. Immediate and late results were satisfactory. Temperature was restored to normal within 48 hours in 2 patients and in 10 to 15 days in the other patients. Expectoration diminished rapidly. Clinical recovery resulted in four to eleven months. Roentgenologic examination did not reveal any sequela in 4 patients, while a cystic cavity persisted in 1 patient in whom a pneumothorax developed when puncture of a second abscess was attempted. Temporary shock, characterized by hyperthermia, sweating and hypotension, occurred after the first puncture in 1 patient. The method is indicated particularly for large, well delineated and superficially localized abscesses.

Ugeskrift for Laeger, Copenhagen

112:203-242 (Feb. 16) 1950

Ileus in New-Born in Connection with Four Cases Treated Operatively. T. C. Gertz.—p. 203.
Atresia of Esophagus Treated with Direct Anastomosis. T. C. Gertz.—p. 209.
Congenital Stridor of Trachea. P. J. Dragsted.—p. 213.
Diagnosis and Treatment of Congenital Heart Disease. I. Boesen.—p. 214.
*Seven Cases of Abdominoanal Sigmoid-Rectum Resection in Treatment of Hirschsprung's Disease: Preliminary Report. C. C. Winkel Smith.—p. 216.
Hirschsprung's Disease, Congenital Megacolon: Revised Theory Concerning Causes, Rational Treatment and Complete Cure. A. Gammeltoft.—p. 223.

112:243-288 (Feb. 23) 1950. **Partial Index**

*Arachnitis (Chronic Leptomeningitis): Review. M. Fog and P. Thygesen.—p. 243.
Place of Electroencephalography in Neurologic Clinic: Review. H. Hertz.—p. 250.
Investigation on Heredity and Electroencephalography in Enuresis: Preliminary Report. H. C. Helsborg.—p. 256.
*Importance of Pneumoencephalography in Epileptics with Reference to Diagnosis of Intracranial Tumor. P. Hedegaard.—p. 261.
Acetylcholine Sensitivity in Myasthenia Gravis. L. Enghaek.—p. 268.
So-Called Shoulder Neuritis. K. Hermann and K. H. Krabbe.—p. 274.

Abdominoanal Sigmoid-Rectum Resection in Hirschsprung's Disease.—Seven children with Hirschsprung's megacolon, aged 3 months to 5 years, were operated on in the children's division of the Rikshospital. The triad of distended abdomen, constipation and intermittent vomiting together with the roentgenologic signs of a dilated colon and normal rectum fulfilled the diagnostic criteria. The clinical symptoms may appear before roentgenologic signs, as in the fourth case, in which clinical symptoms were present from birth but roentgenologic symptoms were not demonstrable for about six weeks. In 5 cases primary resection was performed; in 2 a preliminary colostomy was done. The postoperative course was uneventful in all cases. The author now limits colostomy to cases with compulsory indications, as shrinking of the distal end of the colon after colostomy makes resection more difficult and there may also be the danger of stenosis at the point of resection (Swenson).

Arachnitis (Chronic Leptomeningitis).—Fog and Thygesen define arachnitis as an inflammatory-like process of varying extent and intensity which can occur after different noxae, chemical, mechanical, traumatic, possibly infectious, or from unknown cause. The primary and dominating tissue changes are in the soft membranes of the brain but may also be present in the nerve roots, cerebrum and the spinal cord. Clinically, intracranial and intraspinal arachnitis should be differentiated; in rare cases they may be combined. Both are most often diffuse. In general, the older the process and the greater the extent to which it has involved the parenchyma, the graver the prognosis, but subjective recovery occurs spontaneously in many mild cases. The outlook is favorable in cases in which adhesions and solitary cysts are successfully removed by operation, especially in cases of short duration. Arachnitis is primarily diagnosed by the close relation of the leptomeninges to the nerve roots and the parenchyma of the central nervous system. The unaffected general condition and particularly the fluctuations of cryptogenic aggravations alternating with unexplained remissions in an otherwise chronic course are characteristic. Polyradiculitis, (radiculo)meningoencephalitis, myelitis and encephalitis are to be considered in the differential diagnosis.

Pneumography in Epileptics.—Hedegaard reports that, of 114 patients with epilepsy clinically assumed to be cryptogenic and in 44 with epilepsy of doubtful symptomatic genesis, 5 were found to have an intracranial tumor which either had not been considered or had not been definitely demonstrable at an earlier stage of the disease. Pneumography should not be omitted in patients with probable cryptogenic epilepsy, since epilepsy is frequently the only initial symptom in many tumors. Repeated examination should be performed with the best possible technic. Lumbar and suboccipital pneumography must often be supplemented by ventriculography and arteriography.

Wiener medizinische Wochenschrift, Vienna

100:83-112 (Jan. 28) 1950. **Partial Index**

*Replacement Transfusions According to Method of Pinkus in Icterus Gravis Neonatorum. P. Gautier, J. Guinand-Donisi, F. Thélin and H. Tschumi.—p. 83.
Comparative Clinical and Experimental Studies of Sulfonamide Mixtures of Sulfadiazine and Sulfathiodiazole Series. J. Kimmig.—p. 85.
Primary Atypical Pneumonia (Virus Infection?). F. Lasch.—p. 88.

Replacement Transfusions in Erythroblastosis Fetalis.—Gautier and co-workers treated 6 newborn infants with erythroblastosis fetalis with replacement transfusions, utilizing that portion of the umbilical vein which lies within the abdominal wall. Replacement transfusion, with a maximum of 500 cc. of blood withdrawn and 540 cc. of heparinized blood infused, was performed by withdrawal of divided amounts of 10 to 20 cc., which were replaced by corresponding amounts, thus avoiding the risk of too heavy a load on the circulation. Twenty to 40 cc. of blood were administered in addition to the replaced total amount of blood to prevent anemia; and 20 cc. of a 5 per cent dextrose solution were administered to stimulate diuresis. Vitamin K, calcium, analeptics and 50,000 to 100,000 units of penicillin were administered. Five of the infants recovered. One died within thirty-six hours after the replacement transfusion. Necropsy revealed generalized icterus. Death apparently was not caused by the transfusion. Replacement transfusion should be performed within the first hours of life. It is indicated in cases of icterus gravis neonatorum in which spontaneous recovery or recovery from a simple transfusion cannot be anticipated. Rh-negative blood which is not agglutinated by the maternal blood should be used for the replacement transfusion. Breast feeding by the mother should be discouraged because of the possible presence of agglutinins in the milk. Strict supervision and daily blood cell counts are required for the control of the immediate sequelae of the replacement transfusions. A drop in hemoglobin and in the number of erythrocytes, caused apparently by the arrested development of the bone marrow, was observed within the fourth to fifth week in all the authors' cases. Treatment of this secondary anemia consists of administration of liver extract, iron and small transfusions in cases in which the hemoglobin is below 50 per cent.

BOOK NOTICES

The reviews here published have been prepared by competent authorities and do not represent the opinions of any official bodies unless specifically stated.

Diagnosis and Treatment of Cardiovascular Disease. Edited by William D. Stroud, M.D., F.A.C.P., Professor of Cardiology, University of Pennsylvania Graduate School of Medicine, Philadelphia. In Two Volumes. Fourth edition. Cloth. $25, per set. Pp. 949; 1003-2020, with 809 illustrations. F. A. Davis Company, 1914-16 Cherry St., Philadelphia 3, 1950.

This edition is more than a revision, since most of the articles have been completely rewritten and there are several new contributors. Dr. Stroud is an outstanding cardiologist in his own right, so that he was able to assign to the specialist the task of writing the particular article in the field with which he is most familiar. This book is, therefore, a complete and authoritative reference book on the cardiovascular system.

All phases of the diagnosis and treatment of cardiac diseases are adequately covered. In addition, there are some unique features not ordinarily found in a textbook on cardiac diseases. There is, for instance, a long chapter on methods of rehabilitating the cardiac patient not written in vague generalities but with specific information based on actual data and experience. More than 200 pages are devoted to a thorough coverage of peripheral vascular diseases. There are numerous excellent illustrations. In spite of the many contributors, skilful editing has managed to achieve a unity rarely found in books of this type.

The classification of cardiovascular diseases in chapter 3 is excellent but unfortunately is just different enough from the official classification of the American Heart Association so that it may cause confusion. This is particularly true of the classification of cardiovascular ability wherein the classification discarded by the American Heart Association several years ago is used rather than the present one. This is, of course, a minor defect and will not affect the usefulness of the work as an authoritative, up-to-the-minute reference book on cardiovascular diseases.

Cancer: New Light on Its Causes, Detection, Treatments, Cures and the Brilliant Promise of Today's Research. By Beka Doherty. Cloth. $3. Pp. 327. Random House, 457 Madison Ave., New York 22, 1949.

Increasing public awareness of the complexity and gravity of the cancer problem has resulted in a growing demand for more information about the disease presented in a form suitable for popular consumption. An interested and enlightened segment of the population wants to know more about the nature of the disease, more about the relative successes and failures of the medical profession in meeting its challenge and more about the possibilities for the future as a result of expanding research efforts. It is the general purpose of this book, at least partially, to fulfil these demands.

Although the author is not a physician, she has received counsel and encouragement from a number of outstanding workers in the field of cancer; hence the work is an authoritative and enlightening account of the history and present status of cancer control activities. Written primarily for the nonprofessional reader, the volume will undoubtedly prove to be a valuable asset to the physician to help him to allay the fear, dispel the superstition and overcome the ignorance relative to cancer.

The subject matter of the volume has been organized around four broad aspects of the cancer problem: (1) cancer as related to the patient; (2) cancer from the physician's point of view; (3) cancer as a research problem, and (4) cancer as a public health problem.

From the patient's point of view, an attempt has been made to brush away the social stigma which so frequently was attached to cancer in the past, and a plea is made for intelligent, fearless and prompt action in dealing with any condition suggestive of cancer. A more serious aspect of the problem is reflected in the section dealing with the physician's responsibility to the cancer patient. Particular emphasis is given to the importance of time in diagnosis and adequacy of treatment if a cure from cancer is to be obtained. This, the author believes, requires a high degree of suspicion of malignancy and an urgency for prompt diagnosis and treatment on the part of every practicing physician.

The sections on research and public health, although somewhat heavier reading than the other sections, provide an adequate picture of the wide variety and extent of research projects and public health activities now being conducted in an effort to learn more about the natural history of the disease.

Lists of approved cancer hospitals, clinics and detection centers as well as states providing service for tissue diagnosis and organizations interested in cancer control have been appended. For the benefit of the nonprofessional reader, a glossary would have been a valuable asset to the volume, though none has been provided.

The Organization of Behavior: A Neuropsychological Theory. By D. O. Hebb. Cloth. $4. Pp. 335, with 19 illustrations. John Wiley & Sons, Inc., 440 4th Ave., New York 16; Chapman & Hall, Ltd., 37-39 Essex St., Strand, London, W.C.2, 1949.

The author has attempted to combine present day knowledge of physiology and psychology into a comprehensive theory of thought and emotion to explain the nature of consciousness in physicobiologic terms. The theory is based in considerable part on the variable effect and oftentimes apparent lack of effect which major brain operations have on intelligence and behavior. The concept of the author is that any frequently repeated particular stimulation leads to a slow development of a "cell-assembly" in the cortex and diencephalon and perhaps in the basal ganglions of the brain capable of acting briefly as a closed system which can deliver facilitation to other such systems and having, usually, a specific motor facilitation. A series of such events constitutes a "phase sequence" equivalent to thought process. The process described is considered essential to adult waking behavior. An alternate intrinsic organization is believed to occur during sleep and in infancy which consists of "hypersynchrony" in the firing of cortical cells. A transient disturbance of this organization is said to be the cause of emotional disturbances. Chronic disturbances lead to neurosis or psychosis. The author traces his theory through in a discussion of it as it applies to learning, volition, hunger, emotional disturbances and other factors of behavior.

Two known cases of psychosis in chimpanzees presented from the data of the Yerkes Laboratories of Primate Biology in Florida are of considerable interest.

Although much of the material is of a controversial nature, the viewpoint is interesting and the author has made a real attempt to find a common ground of understanding for current neurophysiologic and psychologic concepts.

Advances in Surgery, Volume I. Editorial Board: William DeWitt Andrus, Chairman, and others. Contributors to Volume I: Arthur H. Blakemore, M.D., and others. Cloth. $11. Pp. 554, with 50 illustrations. Interscience Publishers, Inc., 215 4th Ave., New York 3; Interscience Publishers, Ltd., 2a Southampton Row, London, W.C.1, 1949.

The admirable purpose for which these books are designed will win the appreciation of every surgeon. The big problem is whether any book can keep pace with the actual advances as they occur. The editorial board has succeeded in selecting as contributors a group of men who are busily engaged in advancing the frontiers of surgical science.

The seven main subjects include shock, stricture of the biliary ducts, regeneration of nerves, antibiotics, immersion foot syndrome, vessel anastomosis and tumors of the bone. Especially interesting in the thorough discussion of a modern concept of surgical shock is the knowledge gained from experiments using

radioactive isotopes. Strictures of the common bile duct are apparently a responsibility of the surgeon: prophylaxis is the watchword. The color plates of anatomic variations in the vicinity of the parta hepatis are excellent. Regeneration of nerve tissue is depicted in a series of microphotographs which explain the process. Judgment as to time of repair and type of repair will be enhanced by referring to this chapter. A rapidly expanding field of medicine is that dealing with antibiotics. Already the three substances noted in the addendum to this chapter have assumed great importance. It will be impossible for some time to come to keep any book abreast with the rapid advances in the development of new antibiotic and chemotherapeutic agents.

The immersion foot syndrome is chiefly a development of the last war. It has brought new understanding of the role of the sympathetic nervous system in peripheral vascular disorders. Blood vessel anastomosis has proven useful in surgical treatment of congenital anomalies and in the management of portal hypertension. The latter subject is receiving much attention, and the authors summarize their experiences. Tumors of bone are classified as to benignancy and malignancy. Newer biochemical relationships of bony lesions are outlined. Unfortunately, ability to offer the patient with a malignant bone tumor a hopeful prognosis still depends on diagnosis at the earliest possible time.

Forthcoming volumes will deal with other subjects of interest to surgeons. All physicians will benefit from careful study of these books. Much of the clinical material is a reflection of carefully planned and evaluated experimental work serving to enrich all medical science.

Chemical Developments in Thyroidology. By William T. Salter, M.D., Professor of Pharmacology, Yale University School of Medicine, New Haven, Conn. Publication Number 26, American Lecture Series, a Monograph in American Lectures in Endocrinology, edited by Willard O. Thompson, M.D., Clinical Professor of Medicine, University of Illinois College of Medicine, Chicago. Cloth. $2. Pp. 87, with 6 illustrations. Charles C Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill.; Blackwell Scientific Publications, Ltd., 49 Broad St., Oxford, England; The Ryerson Press, 299 Queen St., W., Toronto 2B, 1950.

This monograph is one of a series of small fabrikoid bound pamphlets which are presumably written as reviews of various phases of medicine. The functions of the thyroid are discussed under the following headings: (1) synthesis of thyroxin, (2) blocking of thyroid activity, (3) circulating iodine, thyroxin and iodinated protein, and (4) radioiodine. The author is an authority in this field of research and frequently refers to his own publications. The illustrations consist mainly of formulas and graphs. A single plate of radioautographs is given by way of histologic illustration, whereas the histologic changes produced by hormones and chemical blocking agents are not illustrated. The author in his introduction states, "None of these trends [of research] is as yet completed and it may be some time before the whole story can be written of each." This apodictive philosophy is reiterated throughout the text, whereas in reality only the biochemical and histochemical surface of these problems has been scratched and progress reports will be written in this field for centuries to come. Within the scope of 87 pages, the author completes his objectives, and physicians who have not kept abreast of recent developments in this field will find this monograph instructive and readable.

Some Trends in Neuroanatomy. By A. T. Rasmussen, Ph.D., Professor of Anatomy, University of Minnesota, Minneapolis. Cloth. $1.90. Pp. 93, with 1 illustration. Wm. C. Brown Company, Dubuque, Iowa, 1947.

In this well arranged little book the history of developments in neuroanatomy is traced by an outstanding authority, better known to many in the broad field of neurology as a beloved professor and a true scientist. It is a well written compendium. The contents are concisely outlined at the beginning, and the index of proper names at the back of the book is a handy reference. It is not a book to be read through at one sitting but a reference work which either the young or old student of neurology, neuroanatomy or neurophysiology will find useful. The manner of printing detracts from the pleasure of reading of this book. It is an important piece of work but of interest to a limited group; hence, it was imperative to keep publishing cost at a minimum.

Radiographic Atlas of Skeletal Development of the Hand and Wrist Based on the Brush Foundation Study of Human Growth and Development Initiated by T. Wingate Todd, M.S., Ch.B., F.R.C.S. By William Walter Greulich, M.A., Ph.D., Professor of Anatomy, Stanford University School of Medicine, Stanford, California, and S. Idell Pyle, M.S., Research Associate, Brush Foundation and Department of Anatomy, Western Reserve University School of Medicine, Cleveland. Cloth. $10. Pp. 190, with illustrations. Stanford University Press, Stanford University, California; Oxford University Press, Amen House, Warwick Sq., London, E.C.4, 1950.

The purpose of this excellent atlas is to supplement the well known work of the author on skeletal development. The senior author worked on the material contained in this book with Todd for many years, and then continued his work after leaving Western Reserve University for his present appointment in the department of anatomy at Stanford University. The book has four main divisions.

The first division consists of a discussion of the rationale and technic of assessing the developmental status of children by examining roentgenograms of the hand and wrist. The inadequacy of height-weight-age tables for determining developmental status is clearly exemplified. The influence of endocrine and other disorders on growth is briefly mentioned. The second and third portions of the book deal with full-sized roentgenographic records of the wrists and hands of male and female subjects from birth to 21 years of age. Finally, there is a section on "maturity indicators of individual bones and epiphyses."

The major portion of this work is well documented, well illustrated and clearly described. The sketches in the section devoted to "maturity indicators" are not as lucid as the authors intended. However, with a little study, one can grasp the points at which the authors are driving and appreciate the importance of many of the factors mentioned.

The quality of some of the illustrations could be improved (for example that appearing on page 91). The illustration of "scar of interrupted growth" might come from a less exotic source than a Japanese boy survivor of Hiroshima; these scars occur from growth arrests of any type, secondary to such common disorders as measles and a moderately long period of short rations.

The format of the work is excellent, but the book would be enhanced by a more extensive biography and an index. The present edition can be heartily recommended to pediatricians, internists and especially to radiologists.

A Text-Book of Medicine for Nurses. By E. Noble Chamberlain, M.D., M.Sc., F.R.C.P. With a Foreword by Dame Ellen Musson, D.B.E., R.R.C., LL.D. Fifth edition. Cloth. $6. Pp. 491, with 73 illustrations. Oxford University Press, 114 5th Ave., New York 11; Amen House, Warwick Sq., London, E.C.4, 1949.

The avowed purpose of this book, expressed in its title, is laudable, but the execution falls short of the mark. The balance between conciseness and brevity on the one hand and adequate presentation on the other is not always well achieved; there are long sections on theoretic bacteriology and neurophysiology, yet infantile convulsions and subarachnoid hemorrhage are dismissed in less than half a page each.

There are places where one might take issue with dogmatic statements concerning therapy, e. g., "Interstitial keratitis (of congenital syphilis) . . . usually responds well to treatment," or the advice of a high residue diet in the treatment of "mucous colitis." On the whole, however, the medical outlook seems conservative and in good general agreement with prevailing thought. Unfortunately, the recent rapid advances in chemotherapy make some of the therapeutic sections of such a volume out-of-date by the time it leaves the press.

Despite its shortcomings, it is usable as a basic textbook for student nurses receiving a lecture course in medical subjects. Moreover, it may well serve to whet the interest of those whose talents may lead them to seek further knowledge.

Anesthesi. By Ernst Trier Mørch. Cloth. Pp. 405, with 130 illustrations. Ejnar Munksgaard, 6 Nørregade, Copenhagen, K, 1949.

This comprehensive textbook covers practically all aspects of anesthesia. The first of its twenty-one chapters gives definitions of terminology, including narcosis, analgesia and anesthesia, followed by an interesting history of opium, hashish (cannabis), chloroform, ether vapor, ethyl chloride, chloral hydrate and other agents. A short chapter on the theories of anesthesia

follows, after which the author considers the pathologic physiology of anesthesia and the chemistry of anesthetics. A chapter on premedication or basic anesthesia precedes that on the symptoms of anesthesia. Information on securing of free air passage introduces discussion of universal anesthesia with ether, divinyl ether and the halogen anesthetics including chloroform, ethyl chloride and trichloroethylene. Gaseous anesthetics, with consideration of nitrous oxide and cyclopropane, are detailed as to methods and essential apparatus. A chapter on intravenous anesthesia with barbiturates includes the treatment of overdosage and gives contraindications. Likewise, varied phases of curare therapy are reviewed. This valuable book concludes with chapters on anesthesia for intrapleural operations, obstetric analgesia, general anesthesia in odontology and, finally, dangers of explosion and the postoperative pulmonary complications of anesthesia.

As a textbook this well prepared volume on a high grade of paper should appeal to all conversant with the Danish language and interested in the many phases of anesthesia. Chapter references enable one to check original information when desired.

The Eosinophil Count in Health and in Mental Disease: A Biometrical Study. By Finn Rud. Translated from Norwegian by Lektor Oskar Nik. Paper. 20 Norwegian kroner. Pp. 443, with 66 illustrations. Johan Grundt Tanum Forlag, Kr. Augustgt. 7a, Oslo, 1947.

This is a detailed study of the number of eosinophils in health and disease. The literature on the subject is reviewed under the headings of physiology and pathology, and personal observations on 150 normal persons and 402 psychiatric patients are analyzed. In the neuroses and in schizophrenias the variations were equivocal, with a possible tendency to increased values in the psychoses. In the manic-depressive psychoses, the lowest values were noted in the ill patients and higher values than normal in the cured patients. An increase in the number of eosinophils was of prognostic value. There was a fall in the number of eosinophils in epileptic attacks and migraine.

A bibliography of 667 articles is appended. The book is an excellent review of the problem of the eosinophil and should serve as a starting point for future work on the nature of this colorful cell.

Interne Praxis: Diagnose, Differentialdiagnose und Therapie. Von Primarius Dr. Heinz Dopsch, em. Leiter der internen Abteilung des Hanuschkrankenhauses in Wien und Dr. Erich Kurtisch, Assistent der internen Abteilung des Hanusskrankenhauses in Wien. Cloth. Price, $12; 120 schillings; 40 marks. Pp. 741, with 116 illustrations. Wilhelm Maudrich, Spitalgasse 1B, Vienna IX/2, 1949.

This volume by two well known clinicians of Vienna is intended as a textbook for students and for the general practitioner. The descriptions of a number of disease entities are limited and superficial, as is to be expected from a one volume opus. But it is in the treatment of various diseases that the authors are not up to date. For example, there is no mention of streptomycin or of paraaminosalicylic acid in the treatment of the various forms of tuberculosis. The authors are apparently not familiar with the remarkable therapeutic effect of 2,3-dimercaptopropanol (BAL) in oil in the treatment of metallic poisons. Treatment of epilepsy is limited to bromides; there is no mention of the newer drugs. Pulmonary abscess is treated with neoarsphenamine (neosalvarsan®), emetine hydrochloride and alcohol. It is only in the treatment of pneumonia that the authors mention the use of the various sulfonamides and of penicillin in sulfonamide-resistant cases.

Memoria del V Congreso internacional de la lepra celebrado en la Habana, Cuba, del 3 al 11 de abril de 1948. Organizado por el gobierno de la República de Cuba con la colaboración de la Asociación internacional de la lepra. Paper. Pp. 1322, with illustrations. Editorial Cenit, Belascoain No. 963, Habana, 1949.

The book is divided into two sections. The first section consists of "information of the committees." This is subdivided into therapy, classification and nomenclature, epidemiology and control, social assistance and use of the words leper and leprosy. All of these subjects appear in Spanish and in English. This section is valuable for the student of leprosy, because, as the titles of the chapters indicate, it gives the treatment and classification accepted by the Congress and the International Association of Leprosy.

The second section is called the reunion of the International Association of Leprosy and consists of papers in the order and language of the presenters. Many of the papers were presented and written in English, some in French. The majority, however, were written in Spanish or Portuguese, with some of the résumés in English. This section is also valuable because it represents the work, experience, and the results obtained by men who have dedicated their lives to the study of this disease.

One seeking information on the subject of leprosy will obtain considerable assistance even if he is able to read only one of the languages in which the book is written.

Vital Statistics of the United States 1947. Part I: Natality and Mortality Data for the United States Tabulated by Place of Occurrence with Supplemental Tables for Hawaii, Puerto Rico, The Virgin Islands and Alaska. Part II: Natality and Mortality Data for the United States Tabulated by Place of Residence. Prepared under the Supervision of Halbert L. Dunn, M.D., Chief, National Office of Vital Statistics, Federal Security Agency, Public Health Service, National Office of Vital Statistics. Cloth. $2.25; $3.50. Pp. 228; 638. Supt. of Doc., Government Printing Office, Washington 25, D. C., 1949.

This compilation, released by the National Office of Vital Statistics, furnish data in the same form and of the same type as that previously published by this office. Part I gives the data classified by place of occurrence and part II by place of residence. Included are the usual tables on births and deaths with breakdowns of deaths by age, sex, cause and geographic division within the United States. The usual subclassifications under these general headings are included as in the past. Population estimates for the midyear, July 1, 1947, are shown in part I.

Conference on Biological Applications of Nuclear Physics July 12-27, 1948, Brookhaven National Laboratory, Associated Universities, Inc., Upton, N. Y. BNL-C-4. Paper. Price, $1.50. Pp. 134, with 67 illustrations. Brookhaven National Laboratory, Associated Universities, Inc., Upton, L. I., N. Y., [n.d.].

This report covers a number of the applications of isotopes and radiation to the fundamental problems of biology. It clearly demonstrates the value of using the newly acquired tracer technics as supplements to the standard methods of research in the life sciences. The individual reports are written by various authors, all well qualified in their respective fields.

The report is of special value because it reviews and summarizes much of the recent information on the chemical and physiologic effects of ionizing radiation. These include discussions such as on the effect of ionizing radiations on aqueous solutions, an enzyme preparation and on the organism as a whole. A discussion of the use of ionizing radiations and ultraviolet rays affecting the general problem of the nature of gene action is included. The reviews of some of the applications of radioactive isotopes of iron, phosphorus and carbon in studies of intermediary metabolism are brief but informative. Discussion of some of the more important health physics problems encountered while working with radioactivity will be of interest to many clinicians.

The reports are well written and contain material which should be of great interest to practicing physicians and certainly to those intimately associated with research in the basic life sciences.

The Author Publisher Printer Complex. By Robert S. Gill. Second edition. Cloth. $1.50. Pp. 144. The Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore 2, 1949.

This brief book presents discussions of various phases of printing and the preparation of copy. It may serve as a source of information for those who are interested in occasional acquaintanceship with printing, but it cannot be regarded by serious students as a reference source. Of course, it can hardly be expected to be satisfactory for reference when it is only pocket size.

Change of Life: A Modern Woman's Guide. By F. S. Edsall. Cloth. $2. Pp. 127, with 2 illustrations. The Woman's Press, 600 Lexington Ave., New York 22, 1949.

Intended to provide answers to questions of women who wonder about the clinical and psychologic symptoms associated with the change of life, this volume offers an interesting approach for intelligent lay readers and much useful information for the average woman.

QUERIES AND MINOR NOTES

The answers here published have been prepared by competent authorities. They do not, however, represent the opinions of any official bodies unless specifically stated in the reply. Anonymous communications and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted on request.

ADDICTION TO BARBITURATES

To the Editor:—A patient is taking fifteen to twenty barbiturate tablets daily. What treatment is recommended? Is there an institution where this type of patient can be treated?

Harry Kirschbaum, M.D., Detroit.

ANSWER.—Treatment of addiction to barbiturates involves two steps: (1) withdrawal of the drugs and (2) a long period of psychotherapy designed to remove the psychic factors which led to the addiction. Treatment should be carried out in an institution which specializes in the management of drug addicts, since attempts at withdrawal in general hospitals or in the home practically always fail. There are private sanatoriums which specialize in the treatment of drug intoxication of different types, and a list of these can be obtained by writing to the American Hospital Association, 18 East Division Street, Chicago. Barbiturate addicts are not eligible for admission to the U. S. Public Health Service Hospitals that treat narcotic drug addicts.

Abrupt withdrawal of barbiturates is absolutely contraindicated in the case described and would almost certainly be followed by the development of convulsions of grand mal type, a psychosis resembling alcoholic delirium tremens, or both. Withdrawal should be conducted gradually. The total daily dosage of barbiturates should not be reduced more than 0.1 Gm. (1½ grains) daily, and from time to time reduction of the dose should be stopped for a few days. Safe withdrawal in the case mentioned would require twenty-one to thirty days. Details concerning withdrawal can be found in the article by Isbell on Manifestations and Treatment of Addiction to Analgesics and Barbiturates which appeared in the *Medical Clinics of North America*, **34**:425 (March) 1950. After completion of withdrawal of barbiturates, psychotherapy should be instituted. The type of psychotherapy would depend entirely on the individual case.

FLUORINE AND STERILITY

To the Editor:—I would appreciate information as to whether fluorine, as an industrial hazard, can induce sterility in the male, by depressing motility of the sperm or by inhibiting hyaluronidase activity.

Samuel Ortenberg, M.D., Montreal, Canada.

ANSWER.—Macleod reported (Effect of Glycolysis Inhibitors and of Certain Substrates on the Metabolism and Motility of Human Spermatozoa, *Endocrinology* **29**:583, 1941) that sodium fluoride solution 1/296 molar, caused rapid and complete inhibition of glycolysis in human sperm followed by failure of motility. However, such concentrations would not be encountered in the body unless relatively large amounts of fluorides were being absorbed. While such concentrations occur conceivably, after the absorption of sodium fluoride from the alimentary tract, it could scarcely follow industrial exposure to fluorides. Phillips and co-workers (Fluorine in the Nutrition of the Rat. II: Its Effect upon Reproduction, *Am. J. Physiol.* **106**:356, 1933) found that the fertility of rats was diminished only when they were fed amounts so great as to give rise to pronounced general toxic effects. Information is not available concerning the inhibitory effect of fluorides on hyaluronidase.

MEASLES AND CONGENITAL HEART DEFECT

To the Editor:—The husband of one of my antepartum patients contracted measles while his wife was six months pregnant. Since the wife never had measles, I gave her a preventive dose of immune serum globulin (human). The patient showed no signs of measles, and the remainder of pregnancy was normal. However, the infant was born with a cardiac septal defect. Could this have been due to the administration of the serum globulin?

M. D., New Jersey.

ANSWER.—No; the defect in the heart was not caused by the administration of serum globulin. Rubella (German measles) can cause congenital deformities of the heart only if the mother has the illness during the first three months of pregnancy. In fact, the heart is completely formed by the ninth or tenth week of gestation and it is doubtful whether rubella can affect its development after that time.

COLORIMETRIC TEST FOR ALCOHOL

To the Editor:—What substances may be taken into the body that might interfere with the colorimetric results of tests of a driver who is suspected of being drunk?

W. A. Hewton, M.D., Beaumont, Texas.

ANSWER.—When a colorimetric test for alcohol is properly performed there is no appreciable interference with the test from any substance taken into the body. Many criticisms of the test have appeared, but none has been valid. For example, it has been said that the volatile oils from the rinds of citrus fruit would react like alcohol in the breath test performed with an instrument known as the "drunkometer." Also onion and garlic and even Limburger cheese have been accused of interfering with the breath test for alcohol, but all these substances have been proved to be without material effect on the test for alcohol (Harger, R. N.: Debunking the Drunkometer, *J. Crim. Law and Criminology* **40**:497-506 [Nov.-Dec.] 1949). The effect of methyl alcohol, ether, chloroform, formaldehyde, paraldehyde, acetone and phenols has been thoroughly investigated. With the exception of methyl alcohol, the presence of these substances is usually apparent by the odor of the breath or of the sample of urine or blood taken for analysis. The presence of methyl alcohol can readily be ascertained by any one of the many tests which depend on the oxidation of formaldehyde to formic acid. Little ether can be present in a patient's blood, and actual tests have indicated that no appreciable error could be made by examining blood or urine of a person who was under ether anesthesia (Heise, H. A.: The Specificity of the Test for Alcohol in Body Fluids, *Am. J. Clin. Path.* **4**:182-188 [Mar.] 1934). Chloroform also does not affect results of any of the present standard methods of testing for alcohol. Formaldehyde, paraldehyde, acetone and phenols can be removed by distillation with mercuric sulfate and lime by the method of Friedemann (*J. Biol. Chem.* **123**:161, 1938). The common source of formaldehyde in the urine is orally taken methenamine (Kozelka and Hine: *Indust. & Engin. Chem. Analyt. Ed.* **13**:905-907 [Dec. 15] 1941). However, if the alcohol from a specimen of urine is distilled after alkalinizing the specimen with slaked lime, aldehydes will not appear in the distillate. It is possible that propyl alcohol, isopropyl alcohol and butyl alcohol might be taken by a person and a false blood analysis obtained. However, all these alcohols are so much more toxic than grain alcohol that this criticism seems to be entirely academic.

PARKINSONISM

To the Editor:—A man aged 32 fell off a catwalk in 1941 and landed in front of an oncoming subway train. He was able to roll himself out of the way at the last moment. He did not sustain any visible injuries. In the following months he manifested a decided tremor in both hands, shuffling gait, stooped spine and masklike facial expression. He was said to be afflicted with Parkinson's disease by two neurologists. Seven years later he underwent hypnoanalytic treatments for his phobias, complete loss of sexual potency and attacks of depression. He was under treatment for one and one-half years. Toward the end of the second half of the first year he began to lose the tremors and the shuffling gait and later the masklike expression of his face. These questions arise: Are there spontaneous remissions in Parkinson's disease? Have any cures been reported in this disease? Did this patient have parkinsonism or a conversion hysteria? Are there any reported treatments of Parkinson's disease by dynamic psychotherapy?

A. D. Jones, M. D., New York.

ANSWER.—Although patients with parkinsonism appear to improve as the result of psychotherapy as well as medicinal treatment, the usual course is gradually downhill. Spontaneous remissions are so uncommon as to make one seriously suspect the diagnosis of parkinsonism. The disease is not curable.

The foregoing summary is not sufficient to permit a statement as to whether this patient had parkinsonism or conversion hysteria. If real improvement occurred and was maintained over a long period of time, one would suspect a psychogenic basis for the patient's symptoms. Psychotherapy of true parkinsonism is merely an adjunctive treatment. It is common knowledge that the symptoms of organic disease may be exaggerated

by emotional reactions. Studies by Mjönes (Paralysis Agitans, Acta psychiat. et neurol. supp. 1. 54:194, 1948) and Siegal (Psychogenic and Organic Determinants and Their Evaluation in the Dyskinesias, Psychiatric Quart. 22:470, 1948) deal with psychotherapy in the treatment of parkinsonism.

SOLID EDEMA OF FACE

To the Editor:—A 45 year old white radio repairman complains of a feeling of fullness in his face and between his eyes. When he smiles, his eyes are closed. His friends tell him his face is becoming fat. He has no unusual headaches and no visual disturbances. The onset was some six weeks previously, after a difficult extraction of a first molar on the right. After this he had an episode which was diagnosed as acute sinusitis and was given three injections of penicillin. This promptly caused an allergic reaction with swelling of the feet, hands and face. At present there is no evidence of drainage from the sinuses. Physical examination and blood studies reveal no abnormalities, except brawny edema in each cheek and increased width between the eyes. There is no pitting edema. The urine is normal. His condition, he feels, has become progressively worse; however, objectively there is little change in a two week period. Please discuss possible causes.

M.D., Texas.

ANSWER.—The clinical picture described may correspond to what is called "solid edema" of the face. There appear to be some different pictures of this entity. In some cases it occurs with signs of recurrent inflammation (erysipelas-like) and with constitutional phenomena. In other instances these changes are absent and the chief signs are those of an increasing brawny swelling as described above and with a tendency toward chronicity. This condition is said to follow infections about the teeth, face and sinuses. The underlying histologic changes are lymphangitis, cellulitis and, in some instances, thrombophlebitis. Ormsby and Montgomery discuss rather fully this and similar type diseases in their textbook (Diseases of the Skin, Ed. 7, Philadelphia, Lea & Febiger, 1948).

HAMSTERS

To the Editor:—Can hamsters be used in place of guinea pigs for inoculation of tuberculous material? Are hamsters clean and easy to handle, and do they bite when handled? It is difficult to get guinea pigs locally.

Thomas McMullen, M.D., Rock Island, Ill.

ANSWER.—The earliest report on the use of the hamster in the diagnosis of tuberculosis was by Korns and Lu (*Chinese M. J.* 41:234, 1927; *Proc. Soc. Exper. Biol. & Med.* 24:807, 1927, and *Am. Rev. Tuberc.* 17:279, 1928) who found Cricetulus griseus (hamster) more susceptible than the white mouse and to such a degree that it may be used to advantage in the clinical laboratory. Not until 1944 did accurate comparisons (*Am. J. Clin. Path.* 14:571, 1944) prove the guinea pig definitely superior to the Syrian hamster in disclosing human tubercle bacilli in small numbers. At that time it was pointed out that the cultural diagnosis of tuberculosis should be the preferred test because it is equal in efficiency and speed to the guinea pig test and is superior economically and in the presence of moderately or slightly virulent mammalian bacilli. Apparently unaware of the last-mentioned observation, it was reported in 1945 (*Proc. Soc. Exper. Biol. & Med.* 60:255, 1945) that the hamster is highly resistant to doses of a virulent strain of the human type of tubercle bacilli that produces widespread tuberculosis in guinea pigs. In these authors' opinion hamsters are of little or no value in routine diagnostic procedures for tuberculosis. Hamsters are clean animals to all intents and purposes. They do not become tuberculous spontaneously but are susceptible to both human and bovine tuberculosis, more so to the latter. Persons accustomed to handling hamsters find them easy to handle, but they are not suitable for young children because they bite under certain conditions. For the diagnosis of tuberculosis the culture is much cheaper and in a number of ways more efficient and direct.

CHILLS BEFORE MENSTRUATION

To the Editor:—A patient aged 32, unipara, primigravida, has chills four to five days prior to her menses. These have been occurring for nine years. After her pregnancy in December 1949, the same phenomenon returned preceding her menses. She has numerous complaints highly suggestive of psychogenic origin. What is the explanation of this phenomenon and the advised treatment?

M.D., California.

ANSWER.—If this patient has real chills, she should be observed to shake and probably has a fever. This could be checked by hospitalizing her for a few days at the proper time. The more likely explanation, if the phenomenon is real, would be that the patient may have hot flushes and chilly sensations, similar to menopausal flushes, just as the estrogen and progesterone levels drop prior to menses. An ovulation temperature chart might bring out this fact.

DYESTUFFS USED IN FOODS

To the Editor:—Certain dyes are said to be carcinogenic. I refer mainly to the so-called butter yellow, an azo dye (Yashida, Kinosita). Are these and similar chemicals being used in this country in foods?

Edmund F. Kohl, M.D., New York.

ANSWER.—Butter yellow is the dye para-dimethylamino-azobenzene, and its use in any foodstuff has been prohibited in this country by law since 1919. The Food and Drug Administration has promulgated regulations providing for the listing of coal tar colors which are harmless and suitable for use in food. These may be obtained by writing to the Food and Drug Administration and requesting the pamphlet, "Service and Regulatory Announcements, Food, Drug and Cosmetic no. 3." There are, at present, eighteen different coal tar colors which are certified as being safe for use in foods. Each batch of a coal tar color to be used in food must be certified by the Food and Drug Administration before it can be so used.

FALSE POSITIVE TEST FOR SYPHILIS

To the Editor:—A woman aged 42 had a positive serologic response to the Kahn. Repeated tests by two state laboratories and one private laboratory were positive. Otherwise she had no complaints. Her husband had two negative Kahn tests at the same time. Any other source of contact was repeatedly denied. Her blood test two years ago and several prior tests had always been negative. There was no history of rash, ulcer or other lesion. Her white blood cell count was 12,400; sedimentation 3 mm. in one hour; quantitative result of Kahn test 4 units; complement fixation test negative; gold curve 0011100000; total protein, 35 mg. per hundred cubic centimeters, and 1 leukocyte per cubic millimeter. The blood smear was negative for malaria and mononucleosis. The patient is now being given 600,000 units of penicillin daily for ten days with a tentative diagnosis of latent syphilis. Is any further treatment recommended if the response of the blood remains positive? What does the low titer indicate?

M.D., Michigan.

ANSWER.—This case description would seem to run true to form as an example of the nonspecific positive or biologic false positive problem in the diagnosis of syphilis. Unfortunately, the history contains little information other than the exclusion of malaria and infectious mononucleosis as possible causes among the many now recognized for a biologic false positive. A biologic false positive test may run the same titers with the same uniformity as a syphilitic positive test over the period of time while the patient is showing this type of reaction. There is, however, a general tendency for biologic false positive results to exhibit serologic discord or conflict between several technics in a test battery (for instance, negative Kolmer and positive Kahn) and for the titers to be lower than those of authentic syphilitic positives. This patient is reported as having a moderate leukocytosis (12,400), which may suggest an infectious process of some sort capable of giving a biologic false positive. The spinal fluid would rate as normal. Physical examination apparently gives no important information, though inexperienced examiners may miss evidence of congenital syphilis identifiable by the expert. It will be noted that the positive reactions are in the precipitation side of the test battery, the Kolmer Wassermann being apparently negative.

As to what particular condition may give rise to a biologic false positive result in a patient of this type, suspicion should certainly point toward virus infection of the nasorespiratory tract, including virus and atypical pneumonia as long as two or three months before the first positive blood test, as a possible cause.

The institution of penicillin therapy in a situation of this sort spoils the problem for further study and makes diagnosis difficult or impossible. The temptation is strong, but it should be resisted until every resource for the settlement of the syphilis question has been employed. This would include the more elaborate pattern study and a multiple test battery, the use of the Neurath euglobulin inhibition and other tests at intervals of a month or two until the trend of titer and serologic reactions can be more accurately mapped. The persistence of low positive titers 2, 4 and even 8 units, may continue to puzzle physician and patient for weeks and even months without the patient's actually having a syphilitic infection.

When to terminate the attempt at diagnosis and whether to terminate it by an acceptance of the possibility of a syphilitic infection and treatment "in case" or "for life insurance," is one of the decisions most difficult to make. One might say tentatively that once a commitment has been made and penicillin administered, the minimum amount given should be 10 million units. The effect of this on the serologic tests, although interesting, would not verify the diagnosis one way or another. Even if the patient had latent syphilis, it is possible that the titer would rise or serologic-fastness would develop at a relatively high titer level rather than that penicillin therapy would change the serologic reactions to negative.

ERUPTION FOLLOWING A HOME PERMANENT

To the Editor:—A woman aged 48 had a mild, diffuse maculopapular eruption of cheeks and forehead, starting two days after she had a Richard Hudnut Home Permanent in which the liquid (neutralizer?) spilled over her face. She also has seborrheic dermatitis of the scalp in thick layers. I treated the condition by elimination of all but simple soaps and Johnson's Baby Lotion. What is the least harmful preparation to use to wash a woman's hair?

Aubrey V. Gould Jr., M.D., Wilton Junction, Iowa.

ANSWER.—The Richard Hudnut Home Permanent Kit includes a waving lotion which has as its essential ingredients sodium and ammonium salts of thioglycolic acid. The neutralizer is potassium bromate. The majority of cold waving preparations available in commerce at present are thioglycolate solutions and the neutralizers are potassium or sodium bromate.

The consensus of investigators who have conducted toxicologic studies on these products is that when reactions occur they usually take the form of a contact dermatitis. Goldman, and others (Permanent Wave Process, *J. A. M. A.* 137:354 [May 22] 1948) stated: "Cold waving solutions are used extensively, and the frequency of reactions is reported to be less than 0.1 per cent. The reactions may be characterized either as varying degrees of primary irritation or, more rarely, as instances of eczematous hypersensitivity." The use of these products in the presence of an existing dermatitis is inadvisable. Representative manufacturers include a caution statement to this effect in their directions for use.

The accepted approach to a contact dermatitis is to establish the causative agent and to eliminate that agent from the environment. Once this is done, improvement is rapid. However, immediate symptomatic treatment with the mildest preparations to give cooling, soothing and antipruritic effects is frequently indicated. For cleansing purposes, agents consisting of neutral sulfonated vegetable oils may be used. Concerning the use of active medicaments L. Schwartz and S. Peck (Cosmetics and Dermatitis, New York, Paul B. Hoeber, Inc., page 158, 1946) stated: "Active medicaments such as tar, sulfur, and mercury which are used in the treatment of chronic eczematoid conditions of unknown etiology are not necessary and often add to the dermatitis already present."

For the normal scalp the majority of soaps and synthetic detergent shampoos are innocuous. Occasionally a person may prefer to simply use a solution of a lightly perfumed white toilet soap. It is difficult to state which is the least harmful type of shampoo for the diseased scalp, since cleansing needs vary with the specific disease. In regard to cleansing agents in contact dermatitis, Schwartz and Peck (*ibid.* page 159) stated: "The use of soap for cleansing the part affected with dermatitis is contraindicated. Many patients with contact dermatitis have a superimposed irritation from soap. Soap substitutes or oils should be used for cleansing. . . ."

RIDGING OF FINGER NAILS

To the Editor:—A friend had infectious hepatitis three years ago with jaundice persisting for several weeks, and an icteric tint in the skin for some time afterward. About three months after the attack she noted longitudinal ridging of the fingernails. In one or two of the nails there is also slight thickening. I have advised the use of hydrous wool fat and the avoidance of nail polishes or polish removers that contain acetone or other solvents. Is there any substitute for nail polish that is not damaging to the finger nails? In the same patient while taking a bath a short time ago the simple process of popping the great toe caused it to become ecchymotic and swollen, and she had to remain off it for a day. Would this indicate a low prothrombin, or low ascorbic acid level? What tests and remedies are recommended? What dosage of vitamin K, menadione sodium bisulfite, by mouth would be indicated in a 120 pound (54.4 Kg.) adult if the prothrombin level is below 40 mg. per hundred cubic centimeters of blood? An outline of proper therapy without undue depletion of the patient's funds would be appreciated.

Joe C. Rude, M.C., Oklahoma City.

ANSWER.—Longitudinal ridging of the nails (onychorrhexis) may occasionally develop after any lengthy or serious infectious disease. It is not a common development after infectious hepatitis, nor is it often seen in the course of portal cirrhosis. Treatment usually advised includes large doses of vitamin A by mouth (50,000 units daily); this may strengthen the nail and increase the rate of growth. Hypoallergic nail polishes may be used. Massaging the nails with deodorized warm castor oil may be helpful. Strong soaps and detergents should be avoided.

The hemorrhage into the tissues of the toe might represent any form of hemorrhagic disease. One would not expect it to be associated with a prothrombin deficiency in the absence of bleeding from other organs. A hepatic functional test with sulfobromophthalein sodium and a determination of prothrombin time should suffice to eliminate chronic hepatic disease as a cause. The dose of vitamin K required to correct certain types of prothrombin deficiency is not large (2 to 4 mg. daily), but in the presence of primary hepatic disease no dosage is likely to be effective. A study of other coagulation factors is recommended here, with particular reference to platelets, bleeding and coagulation times.

DISODIUM PHOSPHATE

To the Editor:—Is there any evidence that disodium phosphate in alkalizing the urine would have the same undesirable effect as monosodium salts and sodium chloride in conditions in which salt should be used sparingly? If so, would one be guided by milliequivalent value?

C. A. Jondo, M.D., Tucson, Ariz.

ANSWER.—Disodium phosphate would supply almost twice the quantity of sodium that would be supplied by an equal weight of monosodium phosphate. Hence, its use in patients whose dietary intake of sodium must be restricted is subject to the same limitations as other sodium salts. One gram of anhydrous monosodium phosphate (sodium biphosphate) would supply 193 mg. of sodium ion, whereas 1 Gm. of anhydrous disodium phosphate would supply 324 mg. of sodium ion. One gram of sodium chloride will supply 397 mg. of sodium ion. Disodium phosphate is about equivalent to sodium chloride in its content of sodium ion, and hence would not be suitable as a urinary alkalizer in patients on a restricted sodium intake. For that matter, monosodium phosphate is unsuitable because it produces an acid reaction in the urine. The milliequivalent value of these salts should not be used as a guide in determining their value; rather, the actual quantity of sodium ion supplied should be considered.

Potassium citrate might be considered as a urinary alkalizer, but the patient must be watched carefully because of the possible effects of potassium ion on the heart. The relative risk of untoward effects of potassium ion in a patient with cardiac damage must be weighed against the necessity of producing an alkaline urine. This is a matter of clinical judgment in the individual case.

ASPERMIA AND CRYPTORCHISM

To the Editor:—A 30 year old white man had bilateral cryptorchism until the age of 17, when the condition was corrected surgically without prior use of hormone therapy. Normal erections and ejaculations occurred before and since operation. No sperm counts were done at the time of operation. The patient has since worked as an x-ray technician. At present his left testicle is small and soft, but the right is of normal size and fairly firm. Semen is of normal quantity, but no sperm are present. Can you suggest therapy to promote spermatogenesis? Will testicular biopsy or hormone studies be of any value?

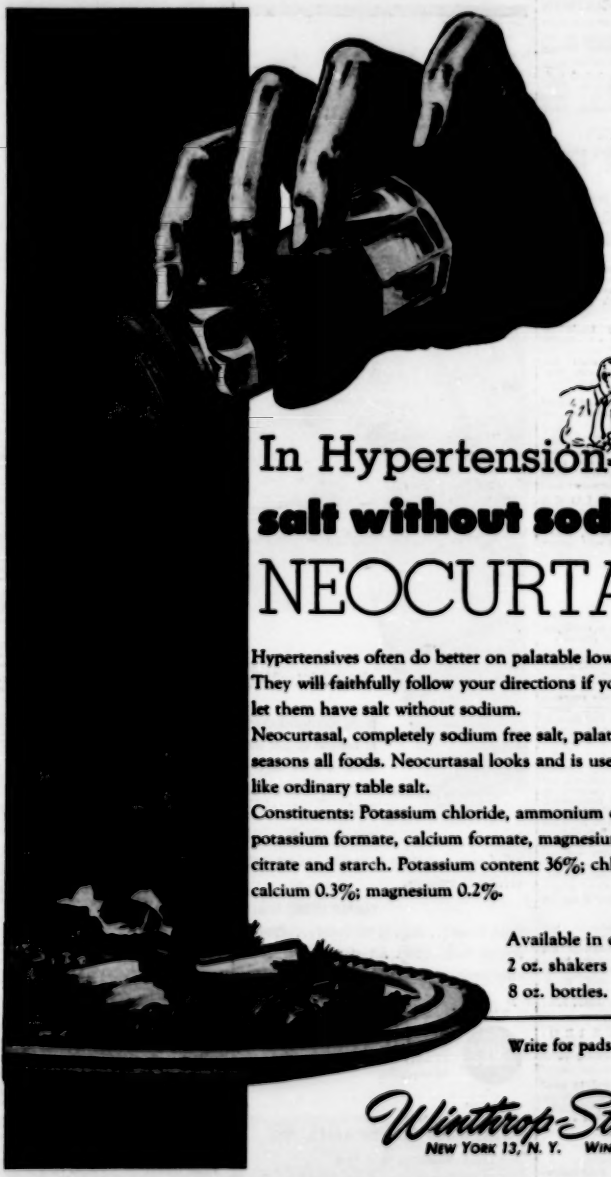
M.D., New York.

ANSWER.—Two factors in this case can contribute to the aspermia. Cryptorchism over a long period of time often results in an atrophy of the seminiferous tubules which may be irreversible if maintained a long time, such as in this case. The other cells of the testes function, however, and therefore support the secondary male characteristics adequately. Since the patient worked as an x-ray technician, there is undoubtedly a risk of exposure to the roentgen rays, which also cause damage to the tubular cells resulting in abnormal spermatogenesis. It is likely that the left testicle is atrophic, probably the result of too prolonged cryptorchism. It is highly doubtful whether there can be any successful therapy in this case, since in all likelihood there is definite organic damage to the tubules. Hormone studies are of little value in this case, but a testicular biopsy might be useful as a diagnostic procedure to confirm the suspicion that the seminiferous tubules are irrevocably damaged.

MUCOUS COLITIS

To the Editor:—With respect to the reply to the query on mucous colitis in The Journal February 18, page 525, I disagree with the statement that the diet should be bland, low in residue and nonlaxative. In functional bowel disease it is essential that the patient accept the fact that there is nothing organically wrong with his bowel, and proper therapy requires that his attention be distracted from his gastrointestinal tract. A special diet of any sort only strengthens the conviction of the patient that his bowel is diseased. In addition to the therapeutic measures mentioned, the use of a bland bulk laxative is of value. By absorbing the excess moisture from the colon and producing a soft bulk, it helps the patient reestablish normal bowel habits. Restriction of tobacco and of alcoholic intake are also helpful. In the case discussed there is no mention of any study other than thorough gastrointestinal examination to rule out organic disease. Certainly amebiasis, giardiasis, allergy and other organic diseases should be ruled out by proctosigmoidoscopy, barium enema and fresh stool examinations before the diagnosis of functional bowel disease is made.

Leon J. Youbenaux, M.D., Shallotte, N. C.



In Hypertension

salt without sodium

NEOCURTASAL®

Hypertensives often do better on palatable low sodium diets. They will faithfully follow your directions if you let them have salt without sodium.

Neocurtasal, completely sodium free salt, palatably seasons all foods. Neocurtasal looks and is used like ordinary table salt.

Constituents: Potassium chloride, ammonium chloride, potassium formate, calcium formate, magnesium citrate and starch. Potassium content 36%; chloride 39.3%; calcium 0.3%; magnesium 0.2%.

Available in convenient 2 oz. shakers and 8 oz. bottles.

Write for pads of diet sheets.

Winthrop-Stearns INC.
NEW YORK 13, N. Y. WINDSOR, ONT.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 N. Dearborn St. Chicago 10, Ill.
Phone WH 4-1900 Cable Address "Jodrin" Chicago

Agents for Great Britain—W. B. Saunders Company Ltd., 7 Grape Street (New Oxford Street) London WC2, England.

SUBSCRIPTION RATES

Price per annum in advance, including postage: Domestic, $12.00. Canadian, $13.50. Foreign, $16.00.

Domestic rates include United States and possessions, Argentina, Bolivia, Brazil, Columbia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guam, Guatemala, Mexico, Nicaragua, Paraguay, Peru, Republic of Honduras, Salvador, Samoa, Spain, Uruguay.

SINGLE COPIES of this and the previous calendar year, 35 cents; two years old, 40 cents; three years old, 45 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. *Currency should not be sent unless the letter is registered.* Stamps in amounts under one dollar are acceptable. Make all checks, etc., payable to "AMERICAN MEDICAL ASSOCIATION."

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

CHANGE OF ADDRESS notice should be received at least 15 days prior to date change is to go into effect, and should state whether change is permanent or temporary. Both old and new address should be given.

WHEN COMMUNICATIONS concern more than one subject, manuscript, news items, reprints, change of address, payment of subscription, membership, information wanted, etc.—correspondents will confer a favor and will secure more prompt attention if they will write on a separate sheet for each subject.

CONTRIBUTORS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

COPYRIGHT: Matter appearing in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is covered by copyright. Permission will be granted on request for the reproduction in reputable publications of anything in the columns of THE JOURNAL if proper credit is given. However, the reproduction for commercial purposes of articles appearing in THE JOURNAL or in any of the special journals published by the Association will not be permitted.

MANUSCRIPTS: Manuscripts should be typewritten, double-spaced, and the original, not the carbon copy, submitted. Carbon copies, or single-spaced manuscripts will not be considered. Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. We cannot promise to return unused manuscript, but try to do so in every instance. *Used manuscript is not returned.* Manuscript should not be rolled.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. Used photographs and drawings are returned, after the article is published, if requested.

ANONYMOUS CONTRIBUTIONS, whether for publication or information, or in the way of criticism, are consigned to the waste basket.

NEWS: Our readers are requested to send in items of news, also *marked* copies of newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

PRICE LIST

A price list describing the various publications of the Association will be sent on request.

AMERICAN MEDICAL ASSOCIATION
535 N. DEARBORN STREET, CHICAGO 10

Active Ingredients:
Triisopropylene ... 0.04%
Sodium Oleate ... 0.02%

In the accomplishment of contraception, no factor is more important than sealing the cervix.

COOPER CREME can be relied upon completely to occlude the external cervical os promptly.

COOPER CREME is esthetic in use . . . clings to the cervix . . . adsorbs seminal fluid . . . does not affect rubber . . . is effective in normal vaginal pH range.

"No finer name in contraceptives"

FREE 6 COOPER Latex Diaphragms with each 12 tubes of COOPER CREME purchased by physicians.

WHITTAKER LABORATORIES, INC.
Peekskill, New York
San Leandro, California

Classified Advertisements

Personal classified advertising rates are $5.50 for ads of 30 words or less and 20c each additional word in regular type or $7.00 for 30 words and 25c each additional word in bold face type. There is also a 35c charge made on the first insertion of an ad when a box number is used and answers sent care of A.M.A. Count 4 additional words for a box.

Commercial classified advertising rates are $7.25 for ads of 30 words or less and 25c each additional word in regular type or $9.00 for 30 words and 30c each additional word in bold face type. Commercial rates cover all ads of manufacturers, dealers, agencies, etc. Box number charge same as personal ads.

CLASSIFIED ADS ARE PAYABLE IN ADVANCE FORMS CLOSE 11 DAYS PRIOR TO DATE OF ISSUE

Journal A.M.A., 535 N. Dearborn St., Chicago 10

NOTICE

TOO BUSY TO PUBLISH YOUR WORK? EXPERT staff writer will do you; also editing, abstracting, bibliographies. Box 9070, % AMA.

BOOKS

BUSY DOCTORS—ORDER ALL THEIR BOOK REQUIREMENTS from the Chicago Medical Book Company, 1939 Congress, Chicago 12, Illinois; immediate delivery; postpaid; free Medical Bulletin.

ASSISTANTS WANTED

WANTED — GENERAL PRACTITIONER; PREFERably married and with some experience; to assist doctor well established 7 years; general institution; salary $4,200, first year, and percentage; Minnesota license or equivalent desirable; 1 and 11 months of Twin Cities Graduate Course available; unusual opportunity for future. Box 9057 B, % AMA.

WANTED—ASSISTANT; DES MOINES, IOWA; OLD established industrial and general practice; fine neighborhood; excellent hours and vacation plus apartment; equipment furnished; good opportunity for young man willing to establish himself in large practice; short final retirement. Box 8975 B, % AMA.

PSYCHIATRIST—ASSOCIATE IN OFFICE AND private hospital practice with Board diplomate; no guarantee; assurance of independently over $10,000 annually; Northwestern school and city of pleasant living. Communicate with Medical Superintendent, Fairfield Hospital, 1017 Boren, Seattle, Washington. B

ASSISTANT WANTED—SOUTH DAKOTA COUNty seat; new hospital; close to six obstetrics, tonsils, hernias, some fractures; general practice; salary basis with progressive increases to partnership; good place for double 1st fellow. Box 9027 B, % AMA.

WANTED—ASSISTANT IN GENERAL PRACTICE; salary $400 per month; 2 months' vacation; recent graduate preferred. Box 9219 B, % AMA.

ASSISTANT WANTED—NORTH DAKOTA COUNty seat; new hospital; considerable surgery; Board preferable; salary 4 figures; full details 1st letter. Box 9092 B, % AMA.

PHYSICIANS WANTED

WANTED — PHYSICIANS; CROWNSVILLE STATE Hospital, Crownsville, Maryland; clinical director $7,392-$9,240; director of psychiatric education $8,868-$10,584; senior physician, psychiatrist $6,336-$7,920; physician, psychiatrist $5,412-$6,792; these positions offer all advantages of employment under Maryland State Merit System; work is generous vacation, sick leave provisions, a liberal retirement system and future security with automatic increases in salary; free family housing available. Mail inquiries: O. A. Allen, Crownsville State Hospital, Crownsville, Maryland. C

HEALTH OFFICERS WANTED—YOUNG PHYsicians desired; graduate surgeons and obstetricians not essential; must be licensed or eligible by reason of practice in Virginia; salaries, regular basis, $4,800-$7,200; double salaries with part training $7,200-$10,800; car allowance and official expenses in addition to salary; advancement opportunities; 30 days' vacation for eligible physicians. Write: The State Department of Health, Richmond 19, Virginia. C

MOUNT OLIVE, ILLINOIS—A CITY OF 5000; LOcated 50 miles northeast of St. Louis, Mo. and 50 miles south of Springfield, Ill.; has 1 doctor and needs another; modern office space available for rent; 2 hospitals within 10 miles; a friendly community with good schools and churches. Contact: John O. Etter, City Clerk for further information. C

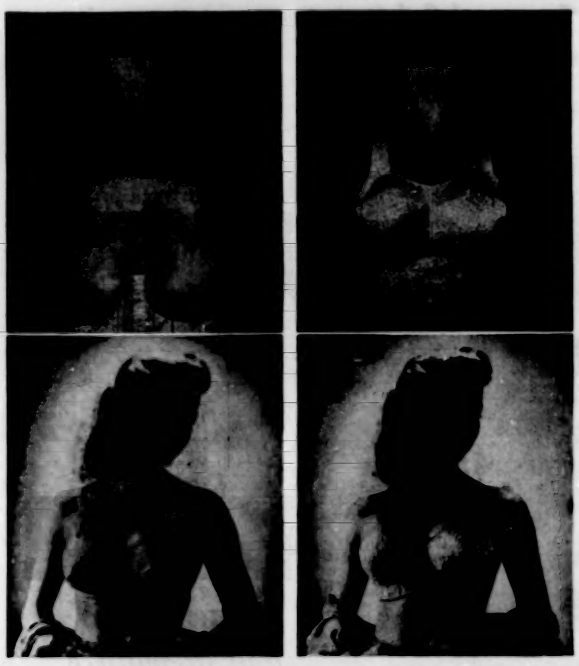
RESIDENT PHYSICIAN — GRADUATE APPROVED medical school plus 1 year internship in approved general hospital to be eligible Arizona license; prefer physician with tuberculosis care and surgery experience. Box 9008 C, % AMA.

WANTED NOW—PHYSICIAN; GRADUATE A MEDIcal school; completed internship for internal medicine; private hospital with associates certified in various specialties; Pennsylvania community 10,000; salary and percentage. Box 9083 C, % AMA

WANTED—AT ONCE; PENNA. LICENSED PHYsician; general practice industrial situation; assisting; new company hospital; salary $600-$1000 to established general; living conditions; desirable community. J. E. Hallam, M.D., Industrial Relations Dept., Penna Indiana 6N, 10 miles north of Pittsburgh. C

WANTED—PHYSICIANS; IN WESTERN STATE HOSpital, Fort Supply, Oklahoma; liberal salary depending upon qualifications and duties. C

(Continued on page 34)



for the
abnormal breast

for the
normal breast

"from adolescence through senescence proper support is essential"[1]

Because the breast proper contains only disseminated fibers of unstriated muscle with a thin layer of underlying connective tissue, adequate mechanical support is an essential measure in breast hygiene from adolescence through senescence.[1,2,3,4]

For the normal breast, support helps prevent prolapse[1]—and may be helpful in the prevention of carcinoma of the breast.[2,3] For the abnormal breast, support relieves pressure and strain, improves posture, restores the appearance of original contours.[1,2,3,4] Note the effectiveness of Spencer Breast Supports in the normal and abnormal conditions illustrated above.

Whatever the breast problem—from asymmetry to mastectomy—Spencer Breast Supports are demonstrably superior because: Each Spencer is *individually designed, cut, and made* for each individual patient. ONLY an individually designed support can adequately meet individual requirements.

individually designed SPENCER SUPPORTS

MAIL coupon below—or PHONE a dealer in Spencer Supports (see "Spencer corsetiere," "Spencer Support Shop," or Classified Section) for information.

[1] La Bau, Elsa E., *Care of the Breast*, Prahon Press, New York, 1947. [2] Nicolson, W. P., Jr., Grady, E. D., *Carcinoma of the Breast*, Annals of Surgery, 127: 992-1009 (May) 1948. [3] Bash, Rieva, *An Appeal to the General Practitioner for Early Recognition and Treatment of Breast Malignancies*, Med. Women's Jr. 50: 41-43 (Feb.) 1943. [4] Seabold, P. S., *The Well-Fitted Brassiere and its Use*, Penna. Med. Jr. 39: 16-19 (Oct.) 1935.

SPENCER, INCORPORATED
139 Derby Ave., New Haven 7, Conn.
Canada: Spencer, Ltd., Bach Island, Que.
England: Spencer, Ltd., Banbury, Oxon.
Send booklet, "Spencer Supports in Modern Medical Practice."
Name ..... M.D.
Address .....
.....
7-22-50

Distinguished for palatability,

PRECOOKED AND FORTIFIED

CEREVIM

cereals

PLUS *vitamins*

PLUS *minerals*

FOR INFANTS AND GROWING CHILDREN

CEREVIM

Distinguished for palatability,

PRECOOKED AND FORTIFIED

CEREVIM

cereals

PLUS *vitamins*

PLUS *minerals*

FOR INFANTS AND GROWING CHILDREN

CEREVIM

SIMILAC DIVISION

M & R Dietetic Laboratories

Columbus, Ohio

Tonics and Sedatives

From the Chicago Daily *News:*

RECOVERING

Hollywood—(AP)—Shirley Yamaguchi, 24, Japanese film actress who says she came here to study the love-making techniques of Hollywood men, is recovering from minor surgery.

t & s

The Annual Report of the Nassau County Mental Hygiene Association contains the following item:

"It was necessary to buy a new print of 'Human Reproduction' as the original was used until it was limp."

—J. L. McCartney

t & s

UNITED MEDICAL SERVICE, INC.
"The Doctors' Plan"
80 LEXINGTON AVENUE
NEW YORK 16, N. Y.

Re: Claim no. 5028681
Certificate no. 6052461G
Patient———— no. 109523
Date(s) Service Rendered 12/15/49
M

The attached check represents the allowance provided under the contract toward the physician's fee for services rendered on the date(s) shown.

We are pleased that membership in the Doctors' Plan has enabled us to be of assistance in this case.

Very truly yours,
United Medical Service, Inc.
New York's Blue Shield Plan

PLEASE HAVE DOCTOR SING AND COMPLETE THE CLAIM FORMS IN THE FUTURE.

Copy To:
J. Kalish, M.D.
39 Bartlett Street,
Brooklyn, New York

BASS?

t & s

From *Sport,* June 1950:

"He [Black Toney, a horse] was a son of Peter Pan and a daughter of Belgravia."

ONE FOR WASHINGTON.

t & s

From *Newsday:*

COP SPOTS FUGITIVE, SHOOTS HIM IN HUB

Hempstead, June 14—Jesse Simpson, 21-year-old Negro chauffeur sought since Monday on a charge of beating up a woman, was shot in the buttock at 12:30 a. m. today by an off-duty Negro cop from the Fifth Precinct who said the youth resisted arrest. The cop, Ptl. James Moore, said he saw the alarm for Simpson's arrest before he went off duty yesterday. He spotted him on Frank St. and tried to arrest him. There were no further details on the shooting. He faces a second degree assault charge made by Rosalie Harrison, 41 Elm Ave. She said he hit her on the head Monday with a piece of wood.

—M. R. Talisman

WHERE'S THAT?

(Continued on page 32)

For term and premature infants

THROUGHOUT THE FIRST YEAR OF LIFE

SIMILAC

whenever breast milk is not available

SIMILAC

For term and premature infants

THROUGHOUT THE FIRST YEAR OF LIFE

SIMILAC

whenever breast milk is not available

SIMILAC

SIMILAC DIVISION

M & R Dietetic Laboratories

Columbus, Ohio

Effective

safe

esthetically agreeable

Treatment of Mycotic Vulvovaginitis (Moniliasis)

Clinical experience[1] continues to accumulate in support of findings that PROPION GEL offers many advantages in the treatment of *Monilia* vaginitis. "The jelly is entirely innocuous, convenient to use, and does not stain the patient's clothing. Relief of pruritus and other symptoms in practically every instance is prompt."[2]

PROPION® GEL

Propionate Compound Jelly

Favored in the treatment of Monilia vaginitis.

1. Consultant in Gynecology, Med. Med. Feb. 1, 1950, p. 68.
2. Am. J. Obst. & Gynec. 54:738 (Nov.) 1947.

Supplied: Tubes, 95 Gm., with or without applicator.

Wyeth Incorporated, Philadelphia 3, Pa.

Wyeth

MANY CHOOSE THE
VISO-CARDIETTE

ON ITS
RECORD

The confidence that the new owner of a Viso-Cardiette *wants* to feel in his equipment comes first from knowledge of Sanborn Company's 25-*year experience* in electrocardiograph design and manufacture. While this background is generally sufficient, further assurance is gained from the Viso-Cardiette record, a record which is not only the "Viso's" three-year reputation as a simplified and fine appearing "direct writer" but also the record that has helped establish that reputation—the "Viso" 'cardiogram.

This is the 'cardiogram on which over six thousand "Viso" users can *depend*, because the "Viso" meets all A. M. A. requirements. And doctors *like* to use "Viso" 'cardiograms because of their adherence to *established standards* of cardiography.

"Viso" records are *inkless*, in standard *rectangular coordinates* and are *permanent*. The paper is standard 6 cm. width with a ruled area 5 cm. wide. It can be handled freely, filed easily.

The coupon below will bring you, without obligation, a new descriptive folder which describes in detail the clinical advantages of the "Viso" record.

SANBORN CO

Please send me without obligation new descriptive Viso-Cardiette Folder

Name.....

Street.....

City & State.....

7-22-50

(Tonics and Sedatives Continued)

From our own J.A.M.A. June 10:

PATHOLOGICAL RESIDENTS—TWO VACANCIES—available July 1st and September 1st; approved 1 to 4 years by AMA; training in preparation for various specialty boards; hospital °+ also approved for residencies in surgery and anesthesiology; location, 5 minutes from Philadelphia and 1 hour from Atlantic City. Write: Director of Pathology Department, West Jersey Hospital, Camden, New Jersey. D

HOW PATHOLOGICAL OUGHT THEY TO BE? ASKS DR. MAX ROSEN.

t & s

STATE MEDICINE IN ENGLAND

Oh! Life in England, it must be merry
For every blessed Tom, Dick or Harry.
Whenever you're ill Oh, it's nothing at all
Just give your M.D. a midnight call.

If you don't feel well and think it's your liver
Or if in your finger you should get a sliver
You never need worry and you need not fret
Just call the M.D. over, while you set.

If you happen to be a trifle neurotic
Because you were not created exotic
Or if you're feeling not quite up to snuff
Just consult the M.D., he'll give you some stuff.

If you've a pain in your head or one in your back
If you've got time on your hands and business is slack
Just go to your doctor, it won't cost a shilling
The poor guy is busy but always is willing.

If you need a wig or maybe a truss
Just go to your M.D.—there will be no fuss
He'll give you a slip, the hard working guy
And you'll get equipped but the cost is high.

The neuroes crowd into his office all day
Why not when there's never a fee to pay?
The neuroes, the psycho, the tired and lazy
Overwork the guy till he's nearly crazy.

He rushes them in and he hurries them out
He tells them it's shingles, arthritis or gout
He hasn't the time for an examination
Nor even to give them a good explanation.

It isn't his fault, he does all he can
He isn't a god, he's only a man.
He's bothered all day by such trivialities
He hasn't got time for important realities.

But this is the good old U.S.A.
Where doctors practice in a much better way.
If you need an M.D. you can take your pick
And he'll not be too busy to care for the sick.

Charles E. Wiley

$25 NEVER BEFORE
the $305
two tubes fluorescent
x-ray illuminator
at this low price . . .

- *bonderized finish*
- *8 ft. cord & plug*
- *4 spring clips*
- *two tubes*
- *all metal*
- *opal glass*

• ORDER NOW!

WOLF X-RAY
PRODUCTS INC
59 Bank Street
New York 14, N.Y.

Ann Woodward
Director

DO YOU WANT TO MEET THIS MAN?

A MAN WALKED INTO OUR OFFICE YESTERDAY — A PHYSICIAN WHOSE EXCEPTIONAL QUALIFICATIONS will certainly win early recognition for him in some fine hospital or with some farsighted group of practitioners.

Training. Experience Age. Working capacity. Personal adaptability. On all these counts, this outstanding candidate's rating is high, and somewhere his abilities are going to be promptly and decisively welcomed.

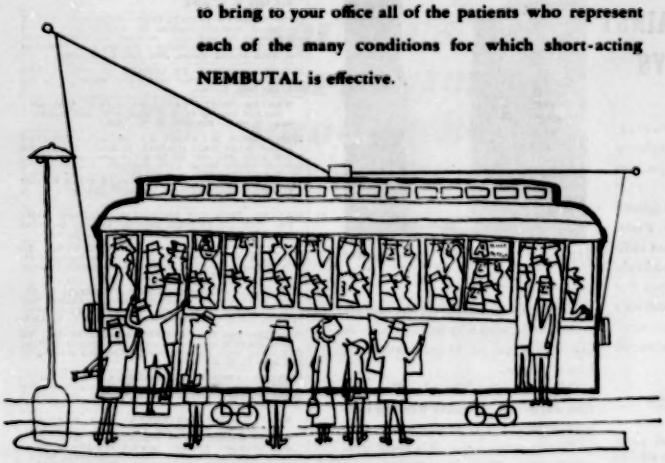
Possibly he is the man *your* hospital or *your* office has sorely needed. If this should be the case, we do indeed covet the satisfaction of presenting his credentials! . . .

Have we a list of your current personnel needs, medical and ancillary?

WOODWARD
Medical Personnel Bureau
NINTH FLOOR • 185 N. WABASH • CHICAGO 1
OUR FIFTY-FOURTH YEAR

It would take a trolley car

to bring to your office all of the patients who represent each of the many conditions for which short-acting NEMBUTAL is effective.

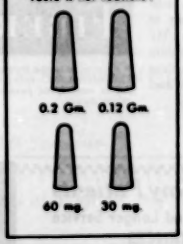


THERE'D be at least 44 of them, for that's how many clinical uses for short-acting NEMBUTAL have been reported in the literature. Glance at the accompanying list. Perhaps it will suggest new applications for short-acting NEMBUTAL in your own practice.

With NEMBUTAL, you can meet any short-acting sedative and hypnotic need—from mild sedation to deep hypnosis. NEMBUTAL's small dosage requirements—only about *one-half* those of many other barbiturates—mean shorter duration of effect, less drug to be inactivated, greater margin of safety and reduced possibility of barbiturate hangover.

NEMBUTAL's wide variety of products simplifies oral, rectal or intravenous administration. You may obtain short-acting NEMBUTAL in the form of Nembutal Sodium, Nembutal Calcium and palatable Nembutal Elixir, all in convenient small-dosage sizes. For booklet "44 Clinical Uses for NEMBUTAL," write to Abbott Laboratories, North Chicago, Illinois. Abbott

Have you tried NEMBUTAL Suppositories for prompt sedation when the oral route is not feasible?



In equal oral doses, no other barbiturate combines

QUICKER, BRIEFER, MORE PROFOUND EFFECT—

NOTE THE NAME **Nembutal®**

(PENTOBARBITAL, ABBOTT)

44 OF NEMBUTAL'S CLINICAL USES

SEDATIVE

Cardiovascular
Hypertension
Coronary disease
Angina
Decompensation
Peripheral vascular disease

Endocrine Disturbances
Hyperthyroid
Menopause

Nausea and Vomiting
Functional or organic disease (acute gastrointestinal and emotional)
X-ray sickness
Pregnancy
Motion sickness

Gastrointestinal Disorders
Cardiospasm
Pylorospasm
Spasm of biliary tract
Spasm of colon
Peptic ulcer
Colitis
Biliary dyskinesia

Allergic Disorders
Irritability
To combat stimulation of ephedrine alone, etc.

Irritability Associated With Infections

Restlessness and Irritability With Pain

Central Nervous System
Paralysis agitans
Chorea
Hysteria
Delirium tremens
Mania

Anticonvulsant
Traumatic
Tetanus
Strychnine
Eclampsia
Status epilepticus
Anesthesia

HYPNOTIC
Induction of Sleep

OBSTETRICAL
Nausea and Vomiting
Eclampsia
Amnesia

SURGICAL
Preoperative Sedation
Basal Anesthesia
Postoperative Sedation

PEDIATRIC
Sedation for:
Special examinations
Blood transfusions
Administration of parenteral fluids
Reactions to immunization procedures
Minor surgery

Preoperative Sedation

FIBERGLAS® REPORTS TO THE PROFESSIONS

RADIO-OPAQUE CLOTH OF FIBERGLAS YARN *protects* PHYSICIANS AGAINST HARMFUL RAYS

Fiberglas lead-glass gown described here being worn by an X-ray technician.

According to long-term studies, leukemia has eight times the incidence among radiologists as among physicians in general.

Scattered radiation, as encountered in fluoroscopy, may be a factor. Arms, shoulders and lower legs are not sufficiently protected by the usual lead-rubber aprons, and one may speculate that continued slight radiological insult may cause a leukemic condition among operators who have delicately balanced hemapoietic systems.†

A Fully Protective Gown Is Developed

To protect the hitherto-exposed parts, Dr. V. W. Archer and associates worked with Owens-Corning Fiberglas Corporation and fabricated a gown of lead-glass cloth which protects parts of the body hitherto exposed. It is thickest over the abdomen, at which level it is built to absorb about 90 per cent of any incident roentgen or gamma radiation and an even higher percentage of the beta radiation encountered in the handling of many radioactive isotypes. With its 10½ pound weight hung from the shoulders and belted-in at the waist, the lead-glass fabric gown is comfortable to wear and allows complete freedom of action.

Insert, inorganic, nonallergenic, nonsensitising and chemically stable, Fiberglas fibers produce no harmful effect on human tissue.

Owens-Corning Fiberglas Corporation supplies adequate working samples of standard Fiberglas products to qualified persons engaged in medical research. Write Owens-Corning Fiberglas Corporation, Dept 31-G4, Toledo 1, Ohio.

†Archer, Vincent W., M. D., et al. Protection against X-ray and Beta Radiation with New Lead-Glass Fabric. Hospital Management. January 1950, pp. 104—106.

FIBERGLAS

® Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.

(Continued from page 28)

WANTED—ANESTHESIOLOGIST; LICENSED IN Florida; diplomate or eligible for American Boards; to direct department of anesthesiology; 240 bed general hospital.*+ Write: Administrator, St. Vincent's Hospital, Jacksonville, Florida. C

WANTED—YOUNG SURGEON; FOR THREE MAN group; orthopedic and general surgery; must have Boards or be eligible; pleasant Denver suburb using Denver hospitals; salary $6400 1st year; full partnership if compatible. Littleton Clinic, Littleton, Colorado. C

WANTED—PHYSICIANS; PREFER GRADUATE OF grade A medical school; for routine work in tuberculosis sanatorium; salary $300-$350 per month; full maintenance for self and family with furnished cottage. Box 9879 C, % AMA.

WANTED—OPHTHALMOLOGIST; NORTH CAROLINA group has unexpectedly fine opening for well-trained ophthalmologist; give particulars 1st letter. Box 9880 C, % AMA.

OHIO WOMEN'S INSTITUTION—WITH NEW FULLY equipped hospital; requires the services of a general practitioner; for part time; excellent opportunity to use balance of time in developing a practice in a community that needs several doctors. Box 9066 C, % AMA.

WANTED—DOCTOR; TO LOCATE IN CITY; LARGE rural area. For further information write: P. O. Box 585, St. Paul, Kansas. C

WANTED—NORTH CAROLINA CLINIC; HAS AN unusual opening for qualified physician; give particulars 1st letter. Box 9879 C, % AMA.

PROSPEROUS MISSOURI COUNTY—DESIRES trained public health physician; to direct its 1 year old health unit; will pay up to $5000 per year. Address: Jefferson County Health Unit, Hillsboro, Missouri. C

YOUNG UROLOGIST—TO ASSOCIATE WITH BOARD urologist; Florida license required. Box 9875 C, % AMA.

WANTED—RESIDENT PHYSICIAN; WABASH RAILroad Hospital; 75 beds; Decatur, Illinois; beginning salary $450 plus maintenance. Box 9871 C, % AMA.

YOUNG DOCTOR—PENNSYLVANIA LICENSE; TO assist in office; October 1, 1950 through December 31, 1950 while partner doing graduate work; western Pennsylvania town of 4500. Box 9869 C, % AMA.

PHYSICIAN—INTERESTED IN PATHOLOGY; TO ASsist Board certified pathologist; 500 bed mothers hospital with excellent material; salary depending on qualifications, family quarters available. Box 9868 C, % AMA.

WANTED—YOUNG GENERAL PRACTITIONER; TO associate with established surgeon in general practice; Gulf Coast town; no investment; salary and commission. Box 9861 C, % AMA.

WANTED — OPHTHALMOLOGIST OR EENT MAN; Gulf Coast town; large territory; association with established practitioner with large practice. Box 9882 C, % AMA.

WANTED—SUPERINTENDENT AND MEDICAL director, 115 bed county tuberculosis sanatorium; northern Wisconsin; open September 1st; active surgical program, auxiliary services established; adequate training, 24 months; modern community; salary open; full family maintenance on grounds available. Address: Hugh C. Bird, Secretary of Trustees, Bridges River Sanatorium, Hawthorne, Wisconsin. C

YOUNG PHYSICIAN—DIPLOMATE AMERICAN Board Internal Medicine; to assume charge newly organized medical department; large state hospital; for mental diseases; salary $6000 plus full maintenance for self and family; opening also for physician as assistant to above; salary $3000-$3750 plus maintenance for self and family. Box 9858 C, % AMA.

PATHOLOGIST—FOR APPOINTMENT AS CHIEF OF department; 300 bed general hospital*; in city of 30,500 not far from New York City; active educational program in conjunction with medical school; young man eligible for Boards acceptable; fine opportunity; best equipment and facilities. Box 9842 C, % AMA.

OPPORTUNITY — TO ESTABLISH LUCRATIVE practice; new and thrifty, brand-new; 391 bed, approved hospital*+; ultimate goal, Board certified or eligible. Write all information: Charles J. Colby, Superintendent, Washington County Hospital, Hagerstown, Maryland. C

WANTED—ROENTGENOLOGIST; FOR MENTAL HOSpital; attractive salary and partial maintenance; 2 excellent colleges in immediate vicinity; submit full information, 3 references and small photograph in 1st letter. Address: Superintendent, Box 325, Milledgeville, Georgia. C

WANTED—STAFF PHYSICIAN; TUBERCULOSIS hospital +; Michigan; salary open; must be a graduate of an approved American medical school; family maintenance and living quarters. Box 9712 C, % AMA.

WANTED—PATHOLOGIST; FOR 350 BED GENERAL hospital*; immediately; in South; guaranteed salary and commission or straight commission basis. Box 9843 C, % AMA.

ORTHOPEDIST — BOARD CERTIFIED OR ELIgible; lucrative opportunity to establish practice; to an attractive community; approved 200 bed hospital*+ without this specialty; location East. Box 9841 C, % AMA.

WANTED—RECENT GRADUATE; GENERAL PRACtice; as assistant-partner or to buy large practice; Minnesota; 25 miles from Twin Cities. Box 9855 C, % AMA.

ESTABLISHED 15 YEARS—MODERN DOCTORS OFfice; unusual lucrative general practice; community needs physician; large drawing territory; $15,000 yearly assured. Box 9849 C, % AMA.

GOLDEN OPPORTUNITY — OPEN SEPTEMBER 1, 1950; for physician and surgeon; in Red River Valley; 15 bed general hospital; rated 1a American Hospital Directory; latest equipment, including new Picker Century X-ray unit; new Steelco-Morris autoclave and sterilizer; dental office and laboratory in hospital. Call or write: W. A. Gunderson, Sharon, North Dakota. C

(Continued on page 36)

Colostomy & Ileostomy Patients

find Comfort, Convenience and Longer Service with PERRY APPLIANCES

Non-irritating Cellulose Pad Prevents Vacuum

COLOSTOMY IRRIGATOR

PERRY CUPS Light weight, clear plastic, leakproof sediment bowl. Odorless. Button-on belt.

Choice of Styles and Sizes

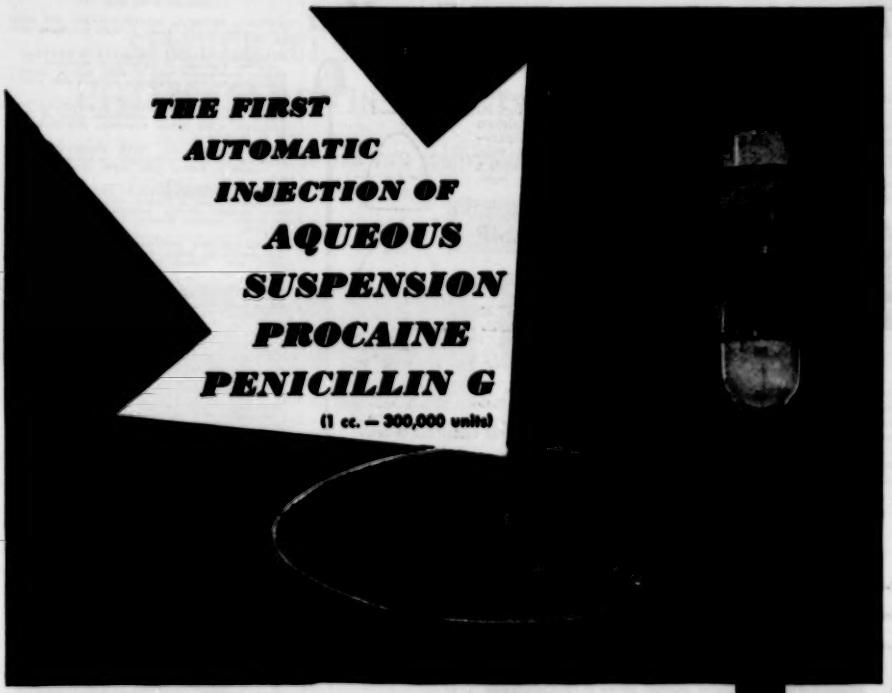
PLASTIC CUP

Perry Irrigator, Sanitary, Convenient. Plastic Disc permits visual insertion of catheter and prevents water backwash.

Known by doctors coast to coast. Guaranteed material and workmanship.

Write for illustrated folder showing complete line.

MURLE PERRY 112 Hennepin Avenue Minneapolis 1, Minn.



AMPINS of Aqueous Suspension of Procaine Penicillin G provide a sterile, free-flowing suspension of uniform consistency that is completely absorbed in the tissues. Each AMPIN contains sufficient penicillin to insure injection of at least 1 cc.

They are (1) Ready for immediate use (2) Nothing to sterilize or assemble (3) Disposable (4) Easy to use (5) No danger of syringe-transmitted hepatitis.

Total Injection Time: Average of 10 Seconds.

AMPINS of Aqueous Suspension of Procaine Penicillin G (1 cc. — 300,000 Units) are available in packages of 1 AMPIN and packages of 5's.

AMPINS, as a device, have been accepted for advertising in publications of the American Medical Association.

Strong Cobb & Co. Inc.
(Professional Products Division)
Cleveland 4, Ohio
PHARMACEUTICALS SINCE 1833

*Reg. U.S. Pat. Off., U.S. Patented and Patents Pending

Distributed in Canada by the Wingate Chemical Company, Ltd., Montreal, P.Q.

Two New Instruments For You

MYERS VEIN STRIPPER

GO-2009 Available in three useful sizes, this comparatively new vein stripper has already won wide acceptance for its simplicity and efficiency of application. The olives, shown actual size in the outlines, are 3/16", 1/4" and 3/4" in diameter—the largest size being for the occasional unusually large vein. The long, flexible, coiled wire staff is 87 cm. in length, with a small olive tip at its other end for threading into the vein. Stainless. Each, **$6.00**

DANIEL COLOSTOMY CLAMP

STAINLESS STEEL

GO-2206 Useful in single, double barreled, Mikulicz or Devine colostomies, cecostomy and ileotomy, the Daniel Clamp aids in early decompression of obstructed bowel, minimizes bowel distention, nausea, vomiting, ileus . . . permits early ingestion of foods and fluid . . . freedom of movement with comfort and safety . . . prevents danger of bowel perforation, wound soiling, tearing or retraction of short colostomy before firm adherence to bowel wall. Stainless. Each, **$18.50**

For All That's Best For The Surgeon

V. Mueller and Company

400 South Honore Street **Chicago 12, Illinois**

For Comfort . . . Neatness . . . For Support . . . Compression

The Dependable Original E-L-A-S-T-I-C Adhesive Bandage

ELASTOPLAST

Trade Mark

Molds and holds to any contour . . . Allows joint motion . . . Provides firm support and controllable compression . . . Does not slip. Assures the neatest, most comfortable dressing in private and hospital practice. Available at your dealer in widths of 1, 2, 2½, 3, 4, 5 and 6 inches, 3 yards long (slack).

* Elastoplast is also available in convenient suit dressings and compresses. Write for literature.

DUKE

(Continued from page 34)

WANTED — GENERAL PRACTITIONER; TO JOIN 2 in general practice; salary to start, percentage basis later. Box 9045 C, % AMA.

SURGEON—REQUIRES ASSOCIATE IN GENERAL practice; knowledge of OB-GYN or specialist desirable; remember 3 men of which serving salary (7500 with bonus); partnership available after year. Box 9030 C, % AMA.

WANTED—ANESTHESIOLOGIST; ELIGIBILITY FOR Boards required; to join established group of anesthesiologists, doing private anesthesia; Mid-West. Box 9024 C, % AMA.

WANTED — INTERNIST; WITH KNOWLEDGE OF cardiology and electrocardiography; to become associated with surgeon in Florida; town 11,000. Box 9021 C, % AMA.

WANTED—HOUSE PHYSICIAN; FOR 75 BED GENeral hospital; class A graduate; eligible for New Jersey license; personal interview desirable; salary, Barbados Yankie Memorial Hospital, Cape May Court House, New Jersey. C

WANTED—SENIOR PSYCHIATRISTS, $9225; RESIdent psychiatrist, $5400. For brochure, apply: R. G. Wearne, MD, Wassaic State School, Wassaic, New York. C

WANTED—PSYCHIATRIST; TO ORGANIZE CLINIC and assist in psychiatric problems; starting salary $7500 and new furnished home; land available at nominal cost if desired. Write: W. C. Bruner, MD, Superintendent, 1200 West Cedar St., Clarendon, Iowa. C

YOUNG AMBITIOUS SURGEON AND INTERNIST OR general practitioner; to associate with general practitioner and pediatrician; in large practice in large Mid-West city; salary and percentage. Box 9020 C, % AMA.

WANTED—FULL TIME ASSISTANT MEDICAL EXaminer; southeastern railroad. Box 9018 C, % AMA.

GENERAL PRACTITIONER — FOR PERMANENT association with general practice, adult and hospital; to consist of first salary for one year with percentage basis thereafter; applicant should have recent graduate examining laboratory or residency. Box 9001 C, % AMA.

PHYSICIAN—YOUNG; MARRIED; STAFF APPROVED 150 bed general hospital; full time salary of $6500 including all maintenance, with extensive increase to top of $7,000 thereafter; 6 days week; generous paid vacation yearly; paid sick leave; liberal, non-contributory retirement plan; consultation completely furnished; 1 man basis; 2nd month including all children. Box 139, Lawton, Oklahoma. C

WANTED — FOR PERMANENT ASSOCIATION; physician considering Army or internal medicine with special interest in heart disease; Board eligible or certified or residency; salary open; apply and request information in full letter. Box 9029 C, % AMA.

WANTED — PHYSICIAN; GENERAL PRACTICE; town of 5000 near Pittsburgh, Pennsylvania; excellent opportunity; only 1 other physician; good open hospitals; many referrals and clinics; home furnished or unfurnished and practice with X-ray for low leasing plan to qualified; will introduce. Box 9026 C, % AMA.

DOCTOR WANTED IMMEDIATELY—FOR GENeral practice; in town and community of 2000; other specialist; city of 15,000 within 30 miles; hospital 10 miles away. Apply: Bamberg Drug Store, Bamberg, South Carolina. C

WANTED—GENERAL PRACTITIONER; WITH SOME surgical assistance; grade A modern hospital privileges with some assistance; good living quarters available; new 32 bed community hospital; serving area 10,000; gross $50,000; 1 doctor in field. Box 482, Chamberlain, South Dakota. C

WANTED — INTERNIST AND PEDIATRICIAN; both must be qualified for the American Board; preferably with some experience in private group; Tulsa, Oklahoma. Box 9028 C, % AMA.

WANTED — RESIDENT PSYCHIATRIST; MENTAL assistant; clinic New York City; experienced electroshock and insulin; salary $7; board-$7.00 extra; license eligible, $7152; graduate American schools. Box 9019 C, % AMA.

ARE YOU INTERESTED IN A POSITION IN ONE OF the county or district health departments? salary $5400 to $7200 with $75 a month allowance for rental; both metropolitan areas available with liberal extended; sick and vacation privileges; eligible for membership in Public Employees Retirement System of Mississippi. Write: J. T. Lockard, MD, Mississippi State Board of Health, Jackson, Mississippi. C

WANTED — QUALIFIED PSYCHIATRIST; NEW York licensed; board certified; clinic privately endowed; staff of 7; salary $7,000 to $8,000 (+); graduate medical school; intern of 1st class hospital; 2 years hospital internal service. Box 9016 C, % AMA.

RESIDENT MEDICAL DIRECTOR—PSYCHIATRIST; with state license (duly or eligible reserve); private 100 bed psychiatric hospital (+); approved residency training; organized visiting staff; salary and insurance for family; full maintenance; call and vote; open September 1st. Box 9750 C, % AMA.

WANTED — STAFF PHYSICIAN; APPOINTMENT entitled July 1, 1950; 300 bed, 3 unit modern hospital (+); affiliated with medical school of Western Reserve University; permanent position in attractive community; salary up to $7200 depending on experience; 2 bedroom home available; rental charge for resident; rooms, Beaumont Arms Hospital, Cleveland 12, Ohio. C

WANTED—ASSISTANT PHYSICIAN; SALARY RANGE $4800-$6000; residents in psychiatry, salary range $3600-$4800; large eastern state mental hospital (+); approved; entire training program; training for American Board. Box 9024 C, % AMA.

WANTED — PROCTOLOGIST; OF OUTSTANDING qualifications to become associated with 20 man clinic; organized program; area of 45,000 having definite need for medical service. 945 Burnsite Larsen, Medical Bureau, Palmolive Building, Chicago.

WANTED—DIRECTOR OF STUDENT HEALTH DEpartment; one of country's largest universities; department well staffed, outstanding opportunity. 945 Burnsite Larsen, Medical Bureau, Palmolive Building, Chicago. C

(Continued on page 38)

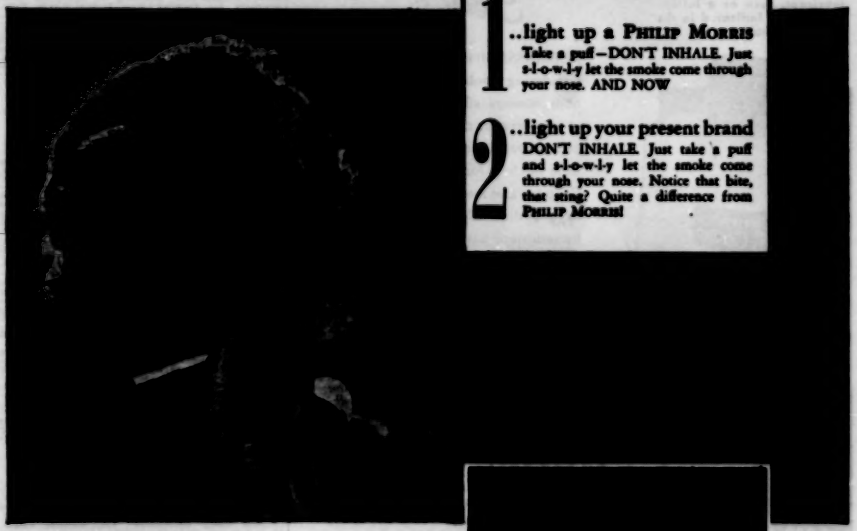
SIMPLE TEST PROVES *INSTANTLY* PHILIP MORRIS ARE LESS IRRITATING

*Now you can confirm for yourself, Doctor, the results of the published studies**

HERE IS ALL YOU DO

1 ..light up a PHILIP MORRIS
Take a puff—DON'T INHALE. Just s-l-o-w-l-y let the smoke come through your nose. AND NOW

2 ..light up your present brand
DON'T INHALE. Just take a puff and s-l-o-w-l-y let the smoke come through your nose. Notice that bite, that sting? Quite a difference from PHILIP MORRIS!



With proof so conclusive... with your own *personal experience* added to the published studies*... would it not be good practice to suggest PHILIP MORRIS to your patients who smoke?

PHILIP MORRIS

Philip Morris & Co., Ltd., Inc., 100 Park Avenue, New York 17, N. Y.

*Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245; N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592; Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

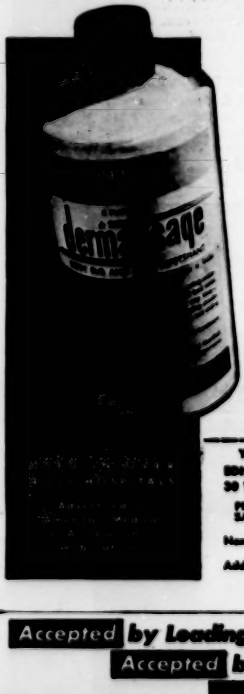
NURSING ARTS,
Mildred L. Mosteg, M.A., R.N., Margaret Fihon, M.A., R.N., Saunders, 1950: p. 237—

"Back care cannot be overemphasized."

p. 377—

"The practice of rubbing the skin, particularly the back, with alcohol to prevent pressure sores is not altogether logical. Alcohol is drying and a dry skin is more susceptible to cracking and infection than is a somewhat oily skin surface . . . Therefore, some kind of lubricant, such as a lotion, seems to be indicated in the care of the back."

HOW IMPORTANT IS PROTECTION of *the Bed Patients' Skin?*



DERMASSAGE is a soothing, non-drying emollient cream for body massage, after bathing, and in measures for the prevention of bedsores. Lanolin and olive oil form the base for absorption. Contains also menthol U. S. P.; oxyquinoline sulphate, a bacteriostatic having deodorant properties; and carbamide, whose solvent action on proteins aids removal of debris and dead tissue. Your supplier has **DERMASSAGE.**

EDISON'S
dermassage

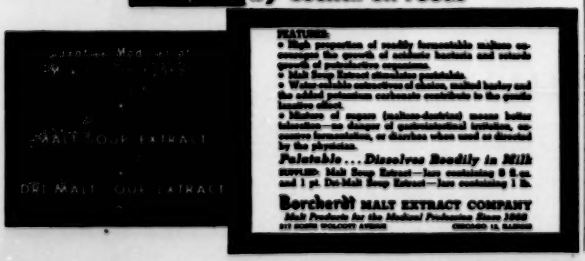
You are invited to test **DERMASSAGE** firsthand
EDISON CHEMICAL COMPANY JAMA 7-22-50
30 W. Washington St., Chicago 2

Please send me, without charge, your **PROFESSIONAL SAMPLE of Edison's DERMASSAGE.**

Name _____

Address _____

Accepted by Leading Pediatricians
Accepted by Council on Foods



(Continued from page 36)

WANTED — GENERAL PRACTITIONER; TO TAKE charge of medical program, industrial company; completely equipped, well staffed clinic; opportunity developing own practice; $18-20 monthly including home; small town; resort area; West. 871, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

ANESTHESIOLOGIST — DIPLOMATE OR ELIGIBLE; 400 bed university hospital; excellent facilities and equipment; outstanding opportunity; large, important, industrial city; to $1000; Central; D220, Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED — ANESTHESIOLOGIST; DIPLOMATE OR near certification with sufficient experience to serve as chief of department 475 bed hospital; college town 125,000; guaranteed retainer plus percentage netting $15,000-$20,000; East. 872, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

RADIOLOGIST—JUNIOR ASSOCIATE; DIPLOMATE of American Board or qualified; hospital; New England; percentage basis averaging $8000-$10,000; department increasing steadily. New York Medical Exchange, 420 Fifth Avenue, 42nd Street, New York, New York. Patricia Edgerly, Director. No registration fee. C

WANTED — YOUNG PEDIATRICIAN; CALIFORNIA licentiate; to head department, small group; salary at start, percentage later; possibility full partnership within few years. 841, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

GENERAL PRACTITIONER — EMPHASIS ON OBstetrics and surgery or pediatrics; associate in well established practice; complete laboratory; thriving northern college town; to $8400; D118, Woodward Medical Bureau, 185 North Wabash, Chicago. C

SURGEON — QUALIFIED; ASSOCIATE SMALL group; excellent location California; consideration given to surgeon whose principal interest lies in neurosurgery. Pacific Coast Medical Bureau, Agency, 1486-1412 Central Tower, San Francisco 3, California. G

GENERAL PRACTITIONER — EMPHASIS ON OBstetrics and gynecology; assist in establishing 5 man group; large, attractive southwestern college city; housing available; to $9,000; D1562, Woodward Medical Bureau, 185 North Wabash, Chicago. C

ASSISTANT — GENERAL PRACTICE; MINNESOTA license or National Boards; well equipped office and equipment; good hospital facilities; $6500 per year, plus salary and percentage; apartment available. New York Medical Exchange, 420 Fifth Avenue, 42nd Street, New York, New York. Patricia Edgerly, Director. No registration fee. C

CLINIC—STAFFED BY 22 SPECIALISTS; EXPANDing facilities; seeks internist, pathologist, ophthalmologist, dermatologist and pediatrician; most qualified to head departments required; should be certified or near certification; town of 85,000, center rich agricultural region; Middle West. 813, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

GENERAL PRACTITIONER — ASSISTANTSHIP FOR year, then take over practice by purchase or partnership; finest residential section, beautiful northwestern college city; exceptional income; D1574, Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED — ASSISTANT MEDICAL DIRECTOR; large insurance company; young man in thirties preferred; advantageous if particularly trained in cardiology, electrocardiography or radiology; minimum $7500 increasing to $10,000-$12,500. 845, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

THE ALLEN AGENCY OF DETROIT—PHYSIcians and all other personnel for the medical and related fields; no registration fee. 812 Kales Bldg., Detroit 26, Michigan. G

WANTED—TUBERCULOSIS SPECIALIST; TO SUCceed medical superintendent, small tuberculosis sanitarium, retiring after 25 years; must be experienced on outskirts of town of 100,000; Middle West; $7500, complete family maintenance. 815, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

INTERNIST — EXCELLENT FOUR MAN GROUP; very active private and hospital practice; gastroenterology training desirable; eligible for certification; southwest, university city; to $7500; excellent partnership possibilities; D436, Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED—OTOLARYNGOLOGIST; TO BECOME ASsociated with one of country's leading clinics; medical school affiliations; excellent hospital, research facilities; should be qualified for faculty appointment. 846, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

RENT—TO LOCATE IN INDIANA; LAKE DISTRICT; beautiful country; guarantee of $12,000. New York Medical Exchange, 420 Fifth Avenue, 42nd Street, New York, New York. Patricia Edgerly, Director. No registration fee. C

WANTED—PHYSICIAN; FOR PART TIME POSITION; medical department, industrial company; program cares for employees only, not families; opportunity developing private practice; university town, 50,000; South. 847, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

ASSOCIATE OBSTETRICIAN-GYNECOLOGIST—DIPlomate or eligible; exceptional opportunity; no qualified competition among 250,000 population; new medical center; Pacific Northwest; percentage first year; D379, Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED—PATHOLOGIST; DIPLOMATE, TO DIRECT laboratories, general hospital and, also, laboratories of group affiliated with it; duties include conducting teaching program; $12,000-$15,000; California. 844, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

WANTED—YOUNG PHYSICIANS; FOR INDUSTRY, hospitals, radiology, pathology, student health, etc. Brown's Medical Bureau, 7 East 42nd Street, New York, New York. C

WANTED — ASSISTANT; BUSY GENERAL PRACtice; preferably young physician particularly interested in medicine; town of 50,000 short distance from Chicago; minimum $7200; early partnership. 849, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

(Continued on page 40)

V 14
1950

Pyribenzamine Cream

and Ointment

★ ". . . a very valuable adjunct in the treatment of dermatitis due to plants, especially poison ivy . . ." in which ". . . relief from itching was almost always an immediate result . . ."[1]

In many instances the local skin conditions are, of course, more rapidly and more completely relieved by the combined topical and oral administration of Pyribenzamine.[1]

For a complimentary trial supply of Pyribenzamine Cream, please address your request to Dept. 250.

1. Carrie, R. E., Krug, E. S. and Glenn, H. R.: Journal Lancet 68:210, 1948

PYRIBENZAMINE® CREAM, 2% tripelennamine hydrochloride in water-washable base.
PYRIBENZAMINE® OINTMENT, 2% tripelennamine hydrochloride in petrolatum base.

Ciba PHARMACEUTICAL PRODUCTS, INC., SUMMIT, NEW JERSEY

(Continued from page 38)

OPHTHALMOLOGIST — EXCELLENT EIGHT MAN group; all diplomates or eligible; exceptional equipment; planning own, new building; attractive percentage arrangements; beautiful mid-west college city; D228. Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED — YOUNG MAN SURGICALLY INCLINED for industrial position in Baltimore area; preferably one interested in career in industrial medicine; physician planning specialty training might be considered. 850. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

INTERNIST — YOUNG; CERTIFIED AMERICAN Board or eligible; Oregon; salary open New York Medical Exchange, 470 Fifth Avenue, 42nd Street, New York, New York. Patricia Edgerly, Director. No registration fee. C

WANTED — RADIOLOGIST; TO DIRECT DEPARTment, 250 bed teaching hospital serving community of 100,000, excellent teaching program; college town; East; salary, percentage. 851, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

PATHOLOGY INSTRUCTOR — LARGE, FULLY APproved, short term and general university hospital; outstanding facilities and equipment; immediate appointment; large southwest state capital; $4000; D401. Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED — INTERNIST; PARTICULARLY WELL trained in cardiology; to become associated with well established private practice group; American Board qualifications required; town of 75,000; Texas. 852, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

CALIFORNIA MEDICAL BUREAU AGENCIES: for physicians and other medical and scientific personnel; write for application blank; registration free. 24 S. Los Robles Ave., Pasadena 1, California. C

WANTED—GENERAL PRACTITIONER; TO BECOME associated with small group; considerable surgery; opportunity for further training in surgery, medicine or obstetrics-gynecology; excellent hospital facilities; Minnesota. 853, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

PEDIATRICIAN — WELL ESTABLISHED 11 MAN group; requires some teaching and research; charming residential section, southwest university city; $6000 1st year, partnership thereafter; D373. Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED—OPHTHALMOLOGIST; TO BECOME ASSOciated with department of ophthalmology, large teaching hospital; staff of full time specialists; should be diplomate or eligible certification. 854, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

ASSOCIATE—IN OBSTETRICS AND GYNECOLOGY; certified American Board or eligible; California; personal interview required; can net $12,000. New York Medical Exchange, 470 Fifth Avenue, New York, New York. Patricia Edgerly, Director. No registration fee. C

WANTED — PSYCHIATRIST OR NEUROPSYCHIATrist; to become associated with small group specializing in neurology and psychiatry; university town of 125,000; ground $12,000 + opportunity advancement. 855, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

PHARMACOLOGIST—DIRECTOR OF CLINICAL INvestigation; direct investigations of new products and develop research program of outstanding research institute and hospital; Pennsylvania licensure; D121. Woodward Medical Bureau, 185 North Wabash, Chicago. C

STUDENT HEALTH—ASSOCIATE DIRECTOR; SOME psychiatry; 2500 students; clinic, infirmary on campus; travel with football team; scenic northwest resort country; to $6000; D142. Woodward Medical Bureau, 185 North Wabash, Chicago. C

GENERAL PRACTITIONER—QUALIFIED TRAUmatic surgery; associated in 4 man group having new clinic; ideal working money. Hyatt Medical Bureau, Phelps Court Medical Bureau, Agency, 1460-1462 Donbrey Tower, San Francisco 3, California. C

WANTED—YOUNG OBSTETRICIAN-GYNECOLOGIST; diplomate or eligible, to assist American Board obstetrician-gynecologist; busy private practice; newly equipped office; interesting location; California. 856, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

ASSOCIATE RADIOLOGIST — DIPLOMATE OR ELIgible; full charge of therapy; 150 bed nonprofit hospital; outstanding facilities, equipment; eastern mountain resort region; percentage equaling $6000-$10,000; D120. Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED—UROLOGIST; DIPLOMATE OF AMERICAN Board or eligible; to head department, 14 man clinic, town of 60,000; group serves trade area of third million; Middle West; $13,000-$15,000. 858, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

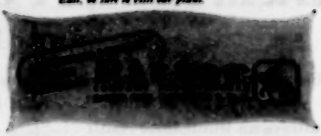
AUTOMATIC
POSITIVE
Sterilization
Every Time

with a
Ritter
DE LUXE
HYDROMATIC
STERILIZER

There's no reason to complicate your day, or your nurse's, with sterilization worries. The new Ritter "E-3" De Luxe Hydromatic Sterilizer *automatically* sterilizes your instruments. The new synchronous timer, set before or after placing instruments in the sterilizer, rigidly controls the actual sterilization period. The timer operates *only* when the water reaches the boiling point.

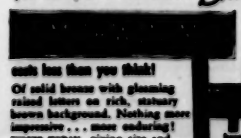
Notice, too, these other exclusive features of Ritter De Luxe Hydromatic Sterilizers. Automatic supply—reservoir holds enough water for a day's operation. Automatic float-type safety switch—tank can't run dry. Automatic water level—water in sterilizing tank always at correct level. Automatic pre-conditioning of water—it is automatically heated before entering tank. Ask your dealer for a demonstration today.

If you are vacationing in the East, be sure to visit our plant.



PLEASE MENTION THE JOURNAL WHEN WRITING ADVERTISERS

your nameplate is beautiful... *Bronze*



costs less than you think!

Of solid bronze with gleaming raised letters on rich, statuary brown background. Nothing more impressive . . . more enduring! WRITE TODAY, giving size and wording for SPECIAL LOW PRICE.

AUTO EMBLEM 2½" x 6"

Solid cast bronze, raised letters — sturdy, durable, fadeless $2.75 each

Official A.M.A. Auto INSIGNIA

Distinctively the sign of a licensed practitioner of medicine. Embodies the Aesculapian staff, the green cross, the initials "M.D." Hard-fired enamel and gilding metal. Copyrighted, numbered, registered. Attaches to edge of license plate with clamp bracket. Sold to A.M.A. members only. Price $2.25 (Complete).

American Medical Association, 535 N. Dearborn St., Chicago 10

MEDICAL PLACEMENT AND MAILING SERVICE

(Mrs. Stewart R. Roberts)
768 Juniper St., N.E.
Atlanta, Georgia

RENT: Well established man in town of 15,000 needs associate; training in leading medical center could be arranged.

RENT: Small South Carolina town offers good location for RENT; hospital available.

RENT: Pleasant client wants RENT or staff.

RENT: Established resort town offers excellent opportunity for RENT; new hospital.

RENT: Town of 20,000; county hospital; needs this specialty.

PEDIATRICIAN: Established physician in good southern town needs associate.

PEDIATRICIAN: Clinic; good location; wants pediatrician.

PEDIATRICIAN: Board member in Virginia needs associate.

PEDIATRICIAN: Woman physician would like associate.

PEDIATRICIAN: Established physician wants associate in Florida location.

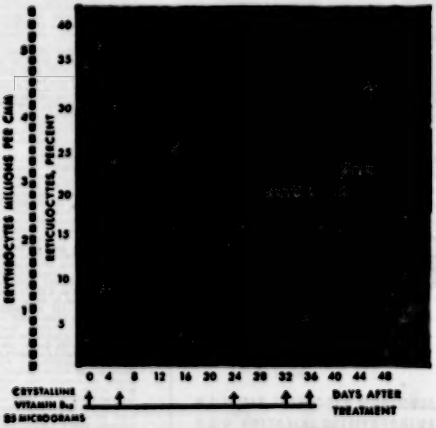
INTERNAL MEDICINE: City of 30,000; new hospital; wants Mayo trained internist.

(Continued on page 42)

POTENT

Anti-Anemia Factor

Pure, Crystalline Compound



First isolated in the Research Laboratories of Merck & Co., Inc., Crystalline Vitamin B_{12} in microgram dosage produces maximum hematologic and neurologic effects.

Crystalline Vitamin B_{12} is a *pure* anti-anemia factor—effective and well tolerated in patients sensitive to liver extracts and concentrates because it contains no deleterious foreign or extraneous matter. No toxicity has been encountered.

It can be injected either subcutaneously or intramuscularly without causing pain or induration.

The low price makes Cobione* most economical.

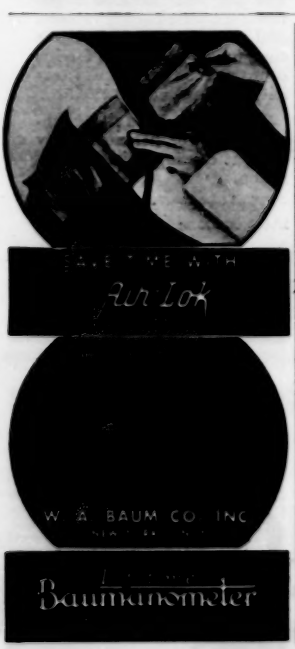
*Cobione is the registered trade-mark of Merck & Co., Inc. for its brand of Crystalline Vitamin B_{12}.

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

MERCK

B_{12} Cobione

Crystalline Vitamin B_{12} Merck



COUNCIL ACCEPTED
Vitarine
brand of
ALUMINUM HYDROXIDE GEL, U.S.P.
AMINOPHYLLINE INJECTION, U.S.P.
Pharmaceutical Products of Exceptional Merit
PARENTERAL PRODUCTS
AMPULS and VIALS
TABLETS · CAPSULES
ELIXIRS · SPECIALTIES
RIGID LABORATORY CONTROL
Samples upon request
Write for catalog #502
THE VITARINE CO., INC.
636 Eleventh Ave. New York 19, N. Y.

(Continued from page 40)

WANTED — DIRECTOR OF RESEARCH; BROAD scientific background in biochemistry, pharmacology or physiology; should be interested in fundamental research pertaining to product development; outstanding candidate required; salary dependent upon qualifications; will offer up to $25,000. 857, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

PEDIATRICIAN — CERTIFIED AMERICAN BOARD or eligible; some teaching; Nebraska; $8000-$10,000. New York Medical Exchange, 499 Fifth Avenue, New York, New York. Patricia Edgerly, Director. No registration fee. C

WANTED—PHYSICIAN; TO BECOME ASSOCIATED with medical department of large industrial company; duties consist of consultations with employees, treatment for polyclinic minor complaints, routine physical and toxicological examinations, research; vicinity New York City. 856, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

PEDIATRICIAN — YOUNG; PREFERABLY CERTified; New Mexico; $6000 plus percentage. New York Medical Exchange, 499 Fifth Avenue, 42nd Street, New York, New York. Patricia Edgerly, Director. No registration fee. C

SHAY MEDICAL AGENCY
55 E. Washington Street
Chicago 2, Illinois

ANESTHESIOLOGY: Virginia hospital; wants young doctor; to take over the department of anesthesia; for basis should provide $1000 a month.

DENTIST: Hospital in Ohio; has openings for 2 dentists; 1 at a salary of $4000 a month and 1 at $4800 a month; personal interview is required.

EENT: Private 7 man group; needs EENT man; salary or salary and commission; estimated income of $12,500 in basis; midwest town of 30,000.

GENERAL PRACTITIONER: Associate to 1 man clinic; includes minor surgery and some of all team work; territory unlimited; up to $10,000 for right man; future partnership.

GYNECOLOGY-RESIDENT: Would you be interested in a year training in gynecological cancer therapy? If you have had 1 or 2 years of training in obstetrics and gynecology, you would be eligible for this residency.

INDUSTRIAL: Staff physician; for large steel company; Mid-West; city; $7000 to $8000 year; 40 hour week.

INTERNIST: A small town in Interior National Park; others an interesting challenge in a practice; interested general practitioner will pay $300 to $400 a month to start with a view to eventual partnership.

LOCUM TENENS: For 6 months or a year; starting on or before August 1st; nationally known insurance company; salary open.

MEDICAL DIRECTOR: Administrator for convalescent home; in East; $5000-$6000 with living quarters and board of home.

OBSTETRICIAN-GYNECOLOGIST: Doctor who has large practice in obstetrics wants to turn over obstetrics on an assistant and gradually limit himself to gynecology; however, the incoming doctor may develop his own gynecological practice; $500 a month to start; city of 175,000; Mid-West.

OPHTHALMOLOGIST: Well trained man to take charge of ophthalmology clinics of 4 to 6 beds; $12,000 beginning salary of $1000 a month; Mid-West.

ORTHOPEDIST: If you have a pleasing personality, are ambitious, have good background, but need training and have good surgical technique, there is a place for you with 3 certified orthopedists in the East; $4000 a month with partnership in 6 months if satisfactory.

OTOLARYNGOLOGIST: Fine opportunity; to work with 2 Board men in EENT; salary open; attractive clinic, sees 200 patients daily.

PATHOLOGIST: 121 bed hospital; seeking pathologist; salary around $20,000 a year; basis of 40 hour week.

PEDIATRICIAN: Young Board qualified pediatrician interested in Florida location; one of several groups on West Florida coast; private practice with cooperative use of hospital of record.

PRACTICE AVAILABLE: For sale or rent; $30,000 business; no better practice in the Mid-west; practically no competition; fully equipped office together with large home for living room; small hospital in town; option is important here.

PROCTOLOGIST: To head department of 20 men group; must be capable of handling staff of 4 to 6 well trained; salary ranges from $20000-$15,000; pleasant mid-west location.

PSYCHIATRIST: Group of 3 in Mid-West will pay up to $12,000 for psychiatrist, or neuro-psychiatrist; city of 175,000.

PUBLIC HEALTH: Physician needed; for mobile unit of blood center; 35 hours; 5 days a week; 8 hours a day; means traveling with $4500 a year to start; liberal expense, substantial increase at intervals; commercial life insurance.

RADIOLOGIST: Junior associate; for department of radiology; hospital 140 beds; permanent; salary open; estimated income of $20000 to $15,000; New England town in resort area.

RESIDENT: Mixed service with special emphasis on obstetrics, surgery, medicine, anesthesia and pediatrics; 225 beds; AOA and full maintenance.

STUDENT HEALTH: Young woman physician; wanted for position for assistant physician and assistant professor of hygiene; in college for women; eastern seaboard.

SURGEON: Associate; for 140 bed general hospital; must be certified or eligible; $1000 a month; good location.

SURGICAL RESIDENT: Approved training under board certified surgeon; 300 bed hospital; 1 or 2 years service; $75 monthly plus room and board; outstanding opportunity.

TEACHING POSITION: If you are young and qualified to teach anatomy, here is an opportunity to become associated with a well known eastern school of medicine as instructor in anatomy; desire someone who plans to make this his life's work.

TUBERCULOSIS: Physician desired; for state sanitarium; in Southwest; some experience in tuberculosis work desired; salary $7,200 a year; furnished cottage with full maintenance for self and family.

UROLOGY: Assistant; to spend 1 year or to of additional training under urologist; $400 a month; Mid-West point.

VIROLOGIST: Associate professor wanted; to teach course in virology to graduate students; $6000 a year for 9 month school year.

(Continued on page 44)

The NITROFURANS

A unique class of antibacterials

FURACIN, LIKE THE ANTIBIOTICS,

exerts its antibacterial effect by a specific disruption of bacterial metabolism.* Its ability to inhibit a variety of enzyme systems essential to their carbohydrate and protein metabolism, may explain its effectiveness against many gram-negative and gram-positive organisms. This metabolic effect of Furacin is not identical with those of penicillin, streptomycin and the sulfonamides, since development of resistance to these agents by bacteria does not affect their susceptibility to Furacin.

Furacin® brand of nitrofurazone N.N.R., is available in 0.2 per cent concentration in water-miscible vehicles.

It is indicated for topical application *in the prophylaxis or treatment of surface infections* of wounds, severe burns, cutaneous ulcers, pyodermas, skin grafts and bacterial otitis. *Literature on request*

EATON LABORATORIES, INC., NORWICH, N. Y.

*Green, M.: *The Effect of Furacin on the Metabolism of Bacteria*, Arch. Biochem. 19:397, 1948 • Green M. and Rudd, S.: *The Susceptibility to Furacin of Bacterial Strains Resistant to Sulfonamides or Antibiotics*, Proc. Soc. Exper. Biol. & Med. 64:57, 1947.

FURACIN SOLUBLE DRESSING • FURACIN SOLUTION • FURACIN ANHYDROUS EAR SOLUTION

when **soap** is **guilty** of initiating, aggravating, or prolonging **dermatitis** and **dermatoses**

use **LOWILA**

- **entirely soapless**
- **cleanses efficiently**
- **virtually non-irritating,** pH right
- **lathers beautifully** in hard or soft water
- **permits the skin to heal** in soap-sensitive patients (housewives, infants, industrial workers, the aged; in pruritus, fungus infections, eczema) . . . where cleanliness is necessary and soap may harm (acne vulgaris, furunculosis, impetigo, psoriasis).

for complete independence from soap

LOWILA cake for skin cleansing, hands, face, bath

LOWILA liquid for household cleaning, laundry, dishes, etc.

send for sample supply and literature

WESTWOOD PHARMACEUTICALS
Division of Foster-Milburn Co.
468 Dewitt St., Buffalo 13, N.Y.

(Continued from page 42)

WANTED—PATHOLOGIST; DIPLOMATE; TO DIRECT laboratories of 2 general hospitals; combined capacity about 400; larger hospital now completing new laboratory department; salary or commission, minimum guarantee of $15,000; town of 50,000, located in agricultural area; middle western state. 860, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

WANTED—GENERAL PRACTITIONER; INTERESTED in medicine; to become associated with small group; town of 10,000; ranching and farming area; northwest Texas; salary, percentage; should net $12,000 1st year increasing later to $15,000-$25,000. 861, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

ASSOCIATE SURGEON—DIPLOMATE OR ELIGIBLE; assist in busy surgical service; 140 bed fully approved, general hospital; attractive southeast county seat 8000; $12,000; D355, Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED — CHIEF OF STAFF, SURGEON OR INternist; diplomate; must be leader primarily interested in clinical aspects of hospital; mature man with considerable private or group practice required; clinic having all specialties represented outstanding clinical and hospital facilities; West; $15,000-$18,000. 862, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

YOUNG PHYSICIAN—INTERESTED IN MEDICAL writing; under 42; large eastern pharmaceutical firm; $4200 to start. New York Medical Exchange, 440 Fifth Avenue, New York, New York. Patricia Edgerly, Director. No registration fee. C

WANTED — ASSOCIATE; BY GENERAL PRACTItioner; considerable surgery; advantageous if trained in obstetrics or medicine; $7200-$10,000 1st year, full partnership later; town of 60,000; Michigan. 863, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

TUBERCULOSIS—ASSISTANT MEDICAL DIRECTOR; requires 1 year medical or tuberculosis residency; 175 bed hospital; excellent equipment and facilities; residential mid-west county seat; D1238. Woodward Medical Bureau, 185 North Wabash, Chicago. C

WELL KNOWN CLINIC—EXPANDING ITS FACILities; needs chief of department of pediatrics; now staffed by 3 pediatricians; mature, well trained diplomate with considerable experience in private or group practice required, should be interested in research; excellent hospital facilities; interesting location; West. 864, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

ADMINISTRATIVE ASSISTANT—PUBLIC HEALTH background; age 30-35; nine welfare group; Pennsylvania; salary $10,000. New York Medical Exchange, 440 Fifth Avenue, New York, New York. Patricia Edgerly, Director. No registration fee. C

WANTED—HOUSE PHYSICIAN; 250 BED GENERAL hospital; operated by private practice group; departments directed by certified specialists; college town, 100,000; Southwest; $700 maintenance. 865, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

PSYCHIATRIST—STAFF VACANCY; LARGE MENTAL hospital; pleasant southeastern university city; beautiful mountain resort region; to $6000 plus complete maintenance for self, family; D466. Woodward Medical Bureau, 185 North Wabash, Chicago. C

WANTED — PHYSICIANS; INTERESTING OPPORtunities for American Board men qualified to head departments, general and industrial physicians, recent graduates desirous of further training; strictly confidential. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. C

INTERNS AND RESIDENTS WANTED

*The * signifies a hospital approved for internships and the + approved for residencies in specialties by the Council on Medical Education and Hospitals of the A. M. A. General Council's approved list for types of internships and residencies approved.*

MIXED RESIDENCIES—AVAILABLE IMMEDIATELY; rotating service; special emphasis on obstetrics, surgery, medicine, contagion, pediatrics; adjacent to large teaching centers; excellent opportunity for interning in entering general practice; complete teaching program; large emergency accident service; salary $250 per month plus full maintenance for individual. Apply: Director, Wilmington General Hospital,*+ Wilmington, Delaware. D

WANTED—FIRST AND SECOND YEAR ROTATING interns; for 230 bed mid-west hospital; fully approved; stipend $125 for 1st year intern, $200 for 2nd year intern, plus full maintenance; full time staff in anesthesia, pathology and X-ray; 10 American Board diplomates on staff; 9110 admissions; 1074 deliveries; autopsy percentage 45%; out patient clinic; organized training program. Apply: Administrator, St. Joseph's Hospital,* South Bend, Indiana. D

WANTED—CHIEF RESIDENT IN MEDICINE; FOR 75 bed AHA and ACS approved hospital; large quantity of diversified medicine; ideal preparation for general practice; guarantee of active staff privileges upon completion of satisfactory residency; salary $3000 per year plus room and board and laundry; must be graduate of grade A school. Apply: Director, Harford Memorial Hospital, Havre de Grace, Maryland. D

GU RESIDENCY—AVAILABLE JANUARY 1, 1951; 3 year program fully approved; 710 bed general hospital,*+ research and teaching facilities; full maintenance and stipend. Apply: Medical Director, Michael Reese Hospital, 29th St. & Ellis Ave., Chicago 16, Illinois. D

UROLOGIC RESIDENT AND TWO MALE GENeral residents; wanted immediately; residencies fully approved; full maintenance and stipend of $140 plus $30 for married resident. St. Joseph Hospital,*+ Lexington, Kentucky. D

WANTED—RESIDENT IN INTERNAL MEDICINE—3 years approved service; 600 bed municipal hospital *+; vacancy occurred due to resident being recalled military service; house staff 28 interns, 40 residents; stipend $75 per month plus full maintenance. Address: Medical Superintendent, Kansas City General Hospital No. 1, Kansas City, Missouri. D

(Continued on page 46)

FOR THE DIABETIC

A SOURCE OF HELPFUL INFORMATION

What is the food value of bread? How can I make a tasty sugar-free dessert? These and many other questions are answered in the CELLU CATALOG. Contains food charts, vitamin and mineral tables, recipes, much other information helpful for the diabetic. Send for Free Copy.

CELLU LOW CARBOHYDRATE Dietary Foods

BUY U. S. SAVINGS BONDS

V-C-B
(VITAMIN C BEVERAGE BASE)
A Special Purpose Food that Helps Supply Vitamin C Needs for All Conditions

"V-C-B contains approximately the same vitamin C and caloric content as fresh orange juice."

HILKER & BLETSCH COMPANY
616 W. Washington St. Chicago 6, Ill.

A Real American Breakfast

That a nutritious breakfast providing generous amounts of high quality protein prevents late morning hypoglycemia has been amply demonstrated. As shown by Thorn and co-workers,[1] and later confirmed by Orent-Keiles,[2] "... breakfast high in protein and low in fat and carbohydrate was followed by an improved sense of well-being and no symptoms of hypoglycemia."

Meat for breakfast—ham, sausage, bacon, breakfast steaks—is an appetizing means of increasing the protein content of the morning meal. Its biologically complete protein contains all essential amino acids, and serves well in complementing less complete proteins from other sources. Furthermore, muscle meat is an outstanding source of B complex vitamins and of iron.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

(1) Thorn, G.W.; Quinby, J.T., and Marshall, C., Jr., Ann. Int. Med. 18:913 (June) 1943.
(2) Orent-Keiles, E., and Hallman, L.F., Circular No. 827, United States Department of Agriculture, Bureau of Human Nutrition and Home Economics, Agricultural Research Administration, Dec., 1949.

American Meat Institute
Main Office, Chicago...Members Throughout the United States

simplify the mother's problem

CEVEX

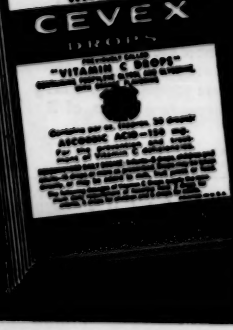
Brand of
ASCORBIC ACID DROPS

Prescribe as you would
VITAMIN C DROPS

Makes it easy to administer adequate amounts of vitamin C to infants and young children. Each drop supplies 5 mg. of vitamin C.

CEVEX may be added to milk, fruit juices, or food.

To ensure that your patients receive the vitamin C drop that is Council accepted specify:



(Continued from page 44)

GENERAL PRACTICE RESIDENCY—JULY TO June, 1951; St. Joseph Hospital,+ Alton, Illinois; AMA approved; 102 beds; excellent teaching program and facilities; $200 with maintenance. Contact: Administrator, Sister Helen. D

MEDICAL RESIDENTS—MALE OR FEMALE; FOR 500 bed chest disease hospital;+ unit of eastern medical center; 1 year internship prerequisite; vacancies beginning January, 1951; starting salary $2000 with complete staff maintenance. Box 9001 D, % AMA. D

RESIDENCY IN PSYCHIATRY—APPROVED HOSpital;+ beginning salary $3650; rapid promotion; applicant should be eligible for New York state license; training includes courses at nearby medical center. Hugh S. Gregory, MD, Director, Binghamton State Hospital, Binghamton, New York. D

INTERNSHIP—AVAILABLE IMMEDIATELY; IN 250 bed general hospital;* fully approved by AMA and ACS; open to graduates of AMA approved schools. Apply: Superintendent, Glens Falls Hospital, Glens Falls, New York. D

WANTED IMMEDIATELY—SURGICAL RESIDENT; also interns; hospital * + has 200 beds; 15 interns and residents. Apply: Dr. A. Babington, Herrick Memorial Hospital, Berkeley 4, California. D

GENERAL ROTATING RESIDENCY—AVAILABLE immediately; 370 bed general hospital; full maintenance plus $130 a month. Superintendent, St. Vincent's Hospital,*+ Erie, Pennsylvania. D

WOMAN PHYSICIAN WANTED—FOR APPROVED medical residency; in accredited 200 bed hospital*+; graduate of approved medical school in USA. Apply: Medical Director, Woman's Hospital of Philadelphia, 3835 Parrish Street, Philadelphia 4, Pennsylvania. D

OTOLARYNGOLOGY RESIDENT—IMMEDIATE NEED for service; in 440 bed fully approved New York City teaching hospital;* lodging, meals, uniforms and laundry furnished; no stipend. Box 9002 D, % AMA. D

OPHTHALMOLOGY RESIDENT—POSITION OPEN January 1, 1951; fully approved program; 718 bed general hospital;*+ research and teaching facilities; full maintenance and stipend. Apply: Medical Director, Michael Reese Hospital, 29th & Ellis Ave., Chicago 16, Illinois. D

WANTED—RESIDENT IN MEDICINE; TO BEGIN now; in 234 bed general hospital having over 2000 medical admissions per year. Write: Chairman, Resident Committee, St. Alexis Hospital,*+ Cleveland, Ohio. D

RADIO THERAPY—APPROVED FELLOWSHIP; ONE year or more, immediately available. Address: Dr. James T. Case, Chicago Tumor Institute,+ 21 West Elm Street, Chicago, Illinois. D

ASSISTANT RESIDENT—IN INTERNAL MEDICINE, to begin immediately; 260 bed Ohio hospital *+; 3 year program approved by AMA; stipend $200 month plus maintenance. Box 9072 D, % AMA. D

RESIDENT—IN SURGERY; FOR 70 BED HOSPITAL; located near Philadelphia; should have Pennsylvania or National Board license. Taylor Hospital, Ridley Park, Pennsylvania. D

APPROVED MEDICAL RESIDENCY—NOW AVAILable, Lakewood Hospital,*+ Lakewood, Ohio. D

12 MONTH AMA APPROVED RESIDENCIES; BEginning immediately; 175 bed general hospital.+ Apply: Administrator, St. Francis Hospital, Miami Beach, Florida. D

OPENING—FOR TWO INTERNS ON ROTATING SERvice; hospital *+ approved for internships and residencies. Apply: Grace Unit, Grace-New Haven Community Hospital, 1418 Chapel Street, New Haven, Connecticut. D

WANTED—JULY, 1950; TWO RESIDENTS; IN INternal medicine; 330 bed full approved general hospital.* + Apply: Supt., St. Elizabeth Hospital, Youngstown, Ohio. D

RADIOLOGY RESIDENCY—ONE YEAR; APPROVED. Evangelical Deaconess Hospital,*+ 1821 W. Wisconsin Ave., Milwaukee 3, Wisconsin. D

PREPARE FOR THE STATE BOARD EXAMS with Hagan's New 1950 revised 9th Edition Medical Study and Review (Board Summary); illustrated; $8. Colt Press, 540 Main St., Paterson 1, New Jersey. D

WANTED—TWO RESIDENTS IN SURGERY; OFFERing training of 1 years duration in preparation for residency training in the surgical specialties; service approved by the Council of American Medical Association; general hospital *+; 175 beds, 20 bassinets; applicants must be graduates of class A American or Canadian medical schools; stipend $150 per month and maintenance. The Deaconess Hospital, Clifton Ave., and Straight St., Cincinnati 29, Ohio. D

WANTED—RESIDENT AND ASSISTANT RESIDENT; in internal medicine; approved for residency by AMA; 180 beds; active out patient department; including all the specialties; salary $165 per month plus uniforms and maintenance. Apply: Director, South Baltimore General Hospital,*+ 1213 Light Street, Baltimore 30, Maryland. D

SECOND YEAR INTERNSHIP AVAILABLE—APproved hospital *; 3679 admissions including 1320 births; 133 bed addition to program to make 201 beds; unusual opportunity to establish general practice in attractive community following 12 months service; generous stipend, uniforms and maintenance; graduate of school of medicine only. Write all information: Charles J. Colter, Superintendent, Washington County Hospital, Hagerstown, Maryland. D

ASSISTANT RESIDENCY—IN INTERNAL MEDICINE; available July 1, 1950; in hospital * with progressive teaching program; approved by the American Board of Internal Medicine; salary $166 per month and maintenance. Apply: Department of Internal Medicine, Chesapeake and Ohio Hospital, Clifton Forge, Virginia. D

WANTED—CHIEF RESIDENT; SEPTEMBER 1, 1950; graduate of approved medical school with Pennsylvania license; salary $200 and maintenance. Director, Methodist Episcopal Hospital,* Broad & Wolf Streets, Philadelphia 48, Pennsylvania. D

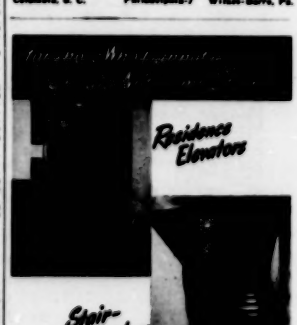
(Continued on page 48)

Artificial Arms Return Wearer to Normal Life

Dwight McGee of Lancaster, Ohio, wearing two Hanger Arms, can write, shave, use a knife and fork, drive an automobile, and says he can do about anything an ordinary person can do. Hanger Arms are custom-made to fit the wearer's stump and his particular daily needs, and are carefully fitted by experienced Hanger fitters. Arms can be furnished with cosmetic or mechanical hand and hook.

HANGER ARTIFICIAL LIMBS

Atlanta-6	Columbus-8, Ohio	Pittsburgh-30
Atlantic-1	Indianapolis-2	Raleigh, N. C.
Baltimore-1	Jacksonville	Richmond-19
Birmingham-1	Memphis	Roanoke-11
Boston-16	Miami, Fla.	San Francisco-3
Charleston-2, W. Va.	Milwaukee-4	St. Louis-3
Charlotte-2, N. C.	Nashville	Tampa
Chicago-7	New Orleans	Toledo
Cincinnati-2	New York-11	Washington-13
Columbia, S. C.	Oklahoma City-3	Wilkes-Barre, Pa.
	Philadelphia-7	



Sedgwick Residence Elevators and Stair-Travelors are designed to eliminate the danger of needless over-exertion caused by stair climbing. Safe, simple and dependable—easy and inexpensive to install—can be operated on ordinary house current at low cost. Nationwide representation.

Write for Illustrated Booklet AM-8

Sedgwick MACHINE WORKS
165 West 16th St., New York

Refresh...
add zest to the hour

Hospitality is an art
Coca-Cola makes it so easy

Ask for it either way
... both trade-marks
mean the same thing.

Coca-Cola
"Coke"

COPYRIGHT 1950, THE COCA-COLA COMPANY

Desenex

OINTMENT AND POWDER OF ZINCUNDECATE

Employs the Undecylenic Acid Zinc Undecylenate "TEAM"

in the Treatment and Prophylaxis of Fungous Infections of the Skin, especially—

DERMATOMYCOSIS PEDIS

"ATHLETE'S FOOT"

Effective
Virtually
non-irritating

Cures the average moderate to severe case in two to three weeks.

OINTMENT

Undecylenic Acid	5%
Zinc Undecylenate	20%

Tubes of 1 oz. Jars of 1 lb.

POWDER

Undecylenic Acid	2%
Zinc Undecylenate	20%

Sifter packages of 1½ oz. Containers of 1 lb.

Trial supplies and literature sent on request.

W&T

Pharmaceutical Division

WALLACE & TIERNAN PRODUCTS, INC.

Belleville 9, N. J., U. S. A.

PD-21

(Continued from page 48)

GENERAL RESIDENCY—IN FULLY APPROVED 250 bed teaching hospital *†; located in a university town; excellent experience for doctor with completed internship; stipend open depending on qualification. Write: Dr. Ernest Stark, Bishop DeGoesbriand Hospital, Burlington, Vermont. D

INTERNSHIPS NOW AVAILABLE—GENERAL ROTating service; 240 bed hospital *†; approved by AMA and ACS; must be graduate of approved medical school; stipend $125 per month and full maintenance. Methodist Hospital, Peoria 5, Illinois. D

RESIDENT POSITION OPEN — 200 BED MODERN progressive general hospital; surgery and obstetrics are particularly active; full maintenance plus liberal salary; Massachusetts temporary license required. Box 268, Fall River, Massachusetts. D

ASSISTANT RESIDENT IN MEDICINE—AMA AND Board approved; 1800 medical admissions; active outpatient. Fairview Park Hospital,*† 3395 Franklin Boulevard, Cleveland 13, Ohio. D

RADIOLOGY RESIDENCY—THREE YEAR APPROVED residency; Bowman Gray School of Medicine and North Carolina Baptist Hospital,*† Apply: Director of Radiology, Baptist Hospital, Winston-Salem 7, North Carolina. D

APPROVED RADIOLOGY RESIDENCY—$100 MONTH plus full maintenance. Apply: Dr. Charles Liebman, Newton Lower Falls, Massachusetts. D

COLUMBIA HOSPITAL*†—MILWAUKEE, WISCONsin has available a 1 year residency; in obstetrics and gynecology; to start on August 1, 1950; salary $100 per month; applications are being received now. D

RESIDENT DOCTOR—APPOINTMENT AUGUST 1ST for 6 months; approved, general voluntary Westchester, New York hospital; substantial remuneration; prerequisites approved medical school and internship. Box 9040 D, % AMA.

COLUMBIA HOSPITAL*†—MILWAUKEE, WISCONsin desires to secure 1 general resident; to fill an appointment for 1 or 2 years; to start August 1, 1950; salary $100 per month; applications are being received now. D

GENERAL SURGICAL RESIDENCY — AVAILABLE July 1, 1950; in an accredited hospital *†+ with university teaching affiliation. For particulars write Dr. Hugh McKenna, St. Joseph Hospital, 2100 Burling Street, Chicago, Illinois. Reverse charges. D

WANTED — RESIDENT PHYSICIAN; MICHIGAN; graduate of an approved American medical school; chest surgery done by Board man; approved medical residency in pulmonary diseases; salary open; complete family maintenance and living quarters. Box 9711 D, % AMA.

RESIDENCY—FOR GENERAL PRACTICE; AVAILable immediately; 82 bed hospital with new 161 bed hospital to be completed this year; large county practice; $300 a month and maintenance. Superintendent, Twin Falls County Hospital, Twin Falls, Idaho. D

WANTED—OBSTETRICAL RESIDENT; AT HOSPItal*† having over 1000 deliveries per year; stipend $200 per month plus maintenance. Write: Chairman, Resident Committee, St. Alexis Hospital, Cleveland, Ohio. D

WANTED—GENERAL PRACTICE RESIDENTS; FOR AMA approved residency; in 170 bed hospital*† accessible to a university medical center; stipend $200 per month. Write: Superintendent, St. Francis Hospital, Beech Grove, Indiana. D

TWO RESIDENT PHYSICIANS WANTED—FOR rotating residencies; to a 126 bed fully approved general hospital*†; must be licensed to practice medicine in Penna.; no others need apply; pleasantly situated near Fairmount Park in suburban Philadelphia; remuneration $200 per month plus maintenance to our doctors home. Memorial Hospital, 5800 Bridge Ave., Philadelphia 28, Pennsylvania. D

OU RESIDENCY—AVAILABLE IMMEDIATELY; APproved 1 or 2 years; 725 bed general hospital*†; in large Mid-West city; large OU service; adequate stipend. Box 9827 D, % AMA.

OP RESIDENCY—FOR ONE YEAR; AVAILABLE immediately; 725 bed general hospital*†; in large Mid-West city; large service; adequate stipend. Box 9828 D, % AMA.

WANTED — INTERN; FOR SMALL PRIVATE HOSpital; in central New Jersey community of 225,000; metropolitan area; general medical and surgical experience; reasonable stipend plus full maintenance. Box 9823 D, % AMA.

WANTED — INTERNS IN OBSTETRICS-GYNEcology; starting July 1950; 320 bed university affiliated hospital*†; large service; full maintenance plus honorarium. Write: Executive Director, Maimonides Hospital, 4802 Tenth Avenue, Brooklyn, New York. D

WANTED — RESIDENT PHYSICIANS; MIXED ROtating services; immediate appointments; new 115 bed acute general hospital; approved ACS; salary $200 per month and maintenance. Apply: Director, Mount Sinai Hospital, Hartford, Connecticut.

RESIDENCY — INTERNAL MEDICINE; AVAILABLE immediately; approved; 235 bed general hospital *†; $150 monthly, full maintenance. St. Peter's General Hospital, New Brunswick, New Jersey. D

RESIDENCY IN INTERNAL MEDICINE—THREE year training program; approved by the American Medical Association and the American Board of Internal Medicine. 328 bed general hospital,*† Apply: Superintendent, The Toledo Hospital, Toledo 4, Ohio. D

RESIDENCIES AVAILABLE IMMEDIATELY — TWO physicians, for residents general hospital Florida; 50 per cent charity; actual surgical experience offered; salary open. Box 9793 D, % AMA.

UNIVERSITY AFFILIATED APPROVED THREE year internal medicine residency; 3 appointments available; 525 bed general hospital *†; Apply: Mount Carmel Mercy Hospital, Detroit 35, Michigan. D

(Continued on page 50)

KLETT

Scientific Instruments

Photo-Electric Colorimeters, Bio-Colorimeters, Hemoglobinometers, Glass Standards, Reomeometers.

Klett-Bio Colorimeter **No. 610**

KLETT MANUFACTURING CO.

177 East 87th St. New York 28, N.Y.

Save Time

IN DETERMINING

BLOOD SUGAR - PSP - NPN - URINE pH - UREA NITROGEN - THIOCYANATE - HEMOGLOBIN - CHOLESTEROL - ICTERUS INDEX - ALL SULFA DRUGS - CREATININE

THE TAYLOR COMBINATION MEDICAL SET can be selected to make any 1 to 11 of the above determinations quickly and easily. Guaranteed accurate color standards, slide base and all necessary reagents and accessories are packed into the lightweight, carrying case . . . ready for immediate use.

FREE DESCRIPTIVE BOOKLET

Write today for your personal copy of the valuable booklet containing latest information on making these determinations. Also describes and illustrates Taylor Medical Comparators. Or, see your dealer for equipment.

W. A. TAYLOR & CO.

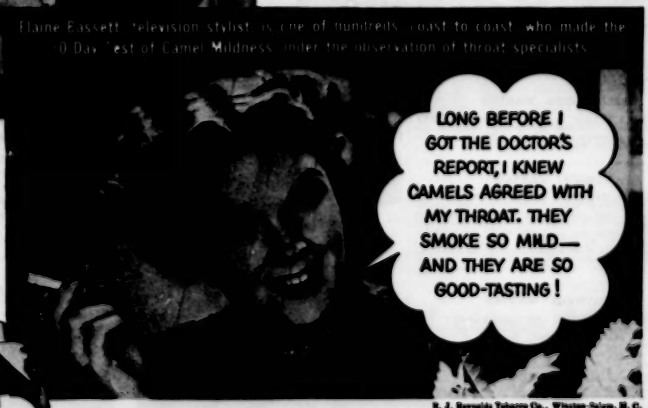
V 1
195

Throat Specialists report on 30-day test of Camel smokers:

"Not one single case of throat irritation due to smoking Camels!"

Yes, these were the findings of throat specialists after a total of 2,470 weekly examinations of the throats of hundreds of men and women who smoked Camels—and only Camels—for 30 consecutive days.

Elaine Bassett, television stylist, is one of hundreds, coast to coast, who made the 30-Day Test of Camel Mildness under the observation of throat specialists.



R. J. Reynolds Tobacco Co., Winston-Salem, N. C.

ACCORDING TO A NATIONWIDE SURVEY:

More Doctors Smoke Camels

THAN ANY OTHER CIGARETTE

Yes, doctors smoke for pleasure, too! In a nationwide survey, three independent research organizations asked 113,597 doctors what cigarette they smoked. The brand named most was Camel.

(Continued from page 48)

ASSISTANT RESIDENCY SURGERY—APPROVED BY AMA for training for preparation for the surgical specialties. Fairview Park Hospital,* 20th Franklin Blvd., Philip Vollmer Jr., Superintendent, Cleveland 13, Ohio. D

APPROVED — NEUROPSYCHIATRIC TRAINING— Up to 3 years; large general voluntary hospital;* 2 and affiliated 62 bed psychiatric clinics with expanding outpatient and child psychiatry departments; intensive therapy dynamically oriented; city near Chicago; psychiatry stipend $250 plus family quarters; brief biography and snap shot in reply. Box 9798 D, % AMA.

IMMEDIATELY AVAILABLE — ONE CHIEF RESIDENCY; requirements internship and previous 1 year residency; stipend $300; 1 general resident; requirement previous internship; stipend $200; we are also accepting applications for general and chief resident for July 1, 1951. Box 9799 D, % AMA.

RESIDENTS—FOR JULY 1, 1950; ROTATING residencies available; in busy well equipped general hospital *+; in metropolitan Philadelphia area; ideal for general practice; weekly clinical meetings; stipend and full maintenance; also vacancies for several interns. Apply Director, The Chester County Hospital, West Chester, Pennsylvania. D

ASSISTANT RESIDENT—MALE OR FEMALE; PRIvate 100 bed psychiatric hospital +; approved for residency training; organized visiting staff; salary and full maintenance; open now. Windsor Hospital, Chagrin Falls, Ohio. D

WANTED — GENERAL RESIDENT; MUST BE graduate of class A school; position now available; salary $250 per month with living quarters provided by 3 room cottage, completely furnished. Apply, Lafayette Home Hospital, Lafayette, Indiana. D

RESIDENTS WANTED AT ONCE—MUST BE A GRADuate of grade A school; rotating service; 240 bed hospital *+; approved for internships and mixed residencies; salary $200 per month plus maintenance. Methodist Hospital, Peoria 5, Illinois. D

WANTED—RESIDENT; FOR A COMBINED SERvice, ophthalmology and otolaryngology; fully approved hospital +; starting July 1950 6 months and complete maintenance; give full details in 1st reply. Box 9840 D, % AMA.

ANESTHESIOLOGY RESIDENCY—APPROVED TWO year residency; integrated with other teaching program; starting July, 1950 or after; full maintenance and $100 1st year; $150 2nd year. Apply Daniel C. Moore, MD, Director of Anesthesia, Virginia Mason Hospital,* 925 Seattle, Washington. D

WANTED — SENIOR RESIDENT; FOR AMA APproved 3 year residency in internal medicine; excellent educational program; salary and maintenance. Apply, Superintendent, Wesley Hospital,* 9th Wichita 6, Kansas. D

ANESTHESIOLOGY RESIDENCIES — AT UNIVERsity of Minnesota, Minneapolis Veterans Administration Hospital and associated hospitals; enlarged clinical services and basic science courses make an opening available each month. Address: Ralph T. Knight, MD, Director of Anesthesiology, University of Minnesota Hospital, Minneapolis, Minnesota. D

WANTED — RESIDENT IN MEDICINE; 200 BED general hospital; practically half of admissions are medical; closed staff; endorsement of respective social boards; college town; South. 888, Burneice Larson, Medical Bureau, Palmolive Building, Chicago. D

RESIDENCIES WANTED

RADIOLOGY RESIDENCY—AGE 27; SINGLE; HAVE had considerable previous non-credited training and experience in diagnosis and therapy; interest is further learning of radiology and Board approval. Box 9894, % AMA.

NURSES WANTED

WANTED — REGISTERED NURSES; TRAINED IN tuberculosis nursing; men and women; for state hospital assignments as head nurse at $2,580-$295 per month or supervising nurse at $230-$319 per month; nurses with special qualifications may be started above the minimum range; opportunity for advancement; excellent retirement and insurance plan; meets approved employment standards of State Nurses Association. Write: Division of Personnel Service, Department of Public Welfare, Springfield, Illinois.

SITUATIONS WANTED

GRADUATE UNIVERSITY OF MINNESOTA — 15 month approved internship, 1 year general practice; 2 years EENT practice in Army; married; 2 children; desires association with general practitioner, ophthalmologist, otolaryngologist or group. Middle West; available immediately. Box 9896 D, % AMA.

GENERAL SURGEON — BOARD ELIGIBLE; SEVEN years formal training; 2 years Army surgery; desires association with established surgeon, group or private practice opportunity; married; 40; immediate availability. Box 9805 I, % AMA.

WANTED — POSITION; INSTITUTIONAL OR CORporate; 25 years active hospital practice; age 52; desire regular hours; licensed New York, Pennsylvania; grade A school; 2 year approved internship; New York City, northeastern Pennsylvania preferred. Box 9888 I, % AMA.

ORTHOPEDIST — 12 YEARS EXPERIENCE; CERTIfied; well trained; dependable; desires position or association; veteran but not reservist; will exchange references; available at once; state proposal 1st letter. Box 9893 I, % AMA.

GENERAL PRACTITIONER — 37; NEW YORK license; desires location private practice; New York City, or county; also association, partnership or part time; 12 years practice Czechoslovakia; mostly internal medicine; experienced also in surgery, obstetrics; American rotating internship. Box 9811 I, % AMA.

INTERNIST — ALLERGIST; 33; MARRIED; LIMIT practice to allergy; available October, 1950; location desired California, Oregon, Florida or Texas. 524 W. 57th Street, Chicago 21, Illinois. I

Books Received

Books received by THE JOURNAL are acknowledged in this column. Selections will be made for more extensive review to the interests of THE JOURNAL readers as space permits. Books listed in this department are not available for lending. Information concerning them will be supplied on request.

FUNDAMENTALS OF CHEMISTRY AND APPLICATIONS, CHOSEN FROM INORGANIC, ORGANIC, AND BIOCHEMISTRY, WITH APPLICATIONS IN PHYSIOLOGY, MICROBIOLOGY, NUTRITION, AND EVERYDAY CONCERNS. By Charlotte A. Francis, A.M., and Edna C. Morse, R.N., A.M., Ed.D., Assistant Professor of Home Economics (Chemistry), Teachers College, Columbia University, New York. Third edition. Cloth. $4.50. Pp. 545, with 99 illustrations. The Macmillan Company, 60 Fifth Ave., New York 11, 1950.

A STORY OF NUTRITIONAL RESEARCH: THE EFFECT OF SOME DIETARY FACTORS ON BONES AND THE NERVOUS SYSTEM. By Sir Edward Mellanby, G.B.E., M.D., Sc.D., Secretary of the British Medical Research Council, London. The Abraham Flexner Lectures, Series Number Nine. Cloth. $5. Pp. 454, with 73 illustrations. Published for Vanderbilt University by Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore 2, 1950.

HANDBOOK ON ACCOUNTING, STATISTICS AND BUSINESS OFFICE PROCEDURES FOR HOSPITALS. SECTION I: UNIFORM HOSPITAL STATISTICS AND CLASSIFICATION OF ACCOUNTS. Publication No. M10-50. Committee on Accounting and Statistics, Council on Administrative Practice of the American Hospital Association. Paper. $2.50, for members. Pp. 155. The Association, 18 E. Division St., Chicago 10, 1950.

VISUAL DEVELOPMENT. VOLUME I. By J. H. Prince, F.R.M.S., F.Z.S., F.B.O.A. With a Foreword by Professor H. Hartridge, M.A., M.D., Sc.D., Professor of Physiology, University of London at St. Bartholomew's Medical College, London. Cloth. $9.50. Pp. 418, with 190 illustrations. Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore 2, 1949.

CLÍNICAS Y POLICLÍNICAS OTORRINOLARINGOLÓGICAS. Por Francisco H. Rivero, Catedrático jubilado de patología quirúrgica en la Universidad central de Venezuela, Caracas. Paper. Pp. 311, with illustrations. P. Fernandez y Cia., S. en C., La Habana, Cuba, 1950.

EINFÜHRUNG IN DIE PATHOLOGISCHE PHYSIOLOGIE. Von Professor Dr. Max Bürger, Direktor der medizinischen Universitätsklinik Leipzig. Third edition. Half-cloth. 42 marks. Pp. 496, with 138 illustrations. Georg Thieme, Thomaskirchhof 21, (16b) Leipzig C1, 1949.

A BILL TO PROVIDE A NATIONAL HEALTH INSURANCE AND PUBLIC HEALTH PROGRAM, 81st CONGRESS, 1st SESSION, JANUARY 5, 1949, IN THE SENATE OF THE UNITED STATES. By Mr. Murray, and others. S. 5. Paper. Pp. 84. Washington, D. C., [1949].

REPORT OF THE DIAGNOSTIC SERVICES OF THE BUREAU OF LABORATORIES FOR 1947, CONNECTICUT STATE DEPARTMENT OF HEALTH. Stanley H. Osborn, M.D., C.P.H., Commissioner, Hartford. Form O-L 131 (8-49) 5C. Paper. Pp. 44. Hartford, [1949].

REPORT OF THE SANITATION SERVICES OF THE BUREAU OF LABORATORIES FOR 1946, CONNECTICUT STATE DEPARTMENT OF HEALTH. Stanley H. Osborn, M.D., C.P.H., Commissioner, Hartford. Form O-L 132 (9-49) 5C. Paper. Pp. 30. Hartford, [1949].

THE COUNTRY DOCTOR ANSWERS THE EWING REPORT. By J. S. DeTar, M.D., Speaker of the House of Delegates, Michigan State Medical Society, Milan, Mich. Paper. Pp. 31. Michigan State Medical Society, 2020 Olds Tower, Lansing 8, [n.d.].

COLLECTED REPRINTS OF THE GRANTEES OF THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS, 1948. VOLUME IX. Publication No. 33H. Cloth. Various pagination, with illustrations. The Foundation, 120 Broadway, New York 5, [n.d.].

(Continued on page 52)

V 1
195

GENERAL SURGEON — 34; WELL TRAINED; DESIRES association or location; passed part 1 of Board; training in gynecological, orthopedics, traumatic and chest surgery as well as general surgery; available soon. Box 9671 I, % AMA.

COLLEGE GRADUATE—MALE; 23; ASPIRING TO graduate study in hospital administration; desires work associated with same; in a Chicago or vicinity hospital; can type. E. Fabey, 4311 West End, Chicago, Illinois. (Columbus 1-6299.) I

SURGEON — BOARD ELIGIBLE; JOHNS HOPkins graduate; excellent resident training general surgery, fracture surgery, urology; veteran; 34; desires position, location for private practice or association with group, individual, board or industry; consider any location. Box 9673 I, % AMA.

INTERNIST-CARDIOLOGIST—DIPLOMATE; 31; FIVE years training internal medicine, university hospital, including 2 years cardiology; experienced electrocardiography, cardiac research; available group, hospital, teaching, other association. Box 9710 I, % AMA.

INTERNIST—COMPLETING BOARD TRAINING; 36; veteran; married; desires association with group, surgeon, or private practice; preferably in South; available August, 1950; small town considered. Box 9626 I, % AMA.

ORTHOPEDIC SURGEON—AGE 38; CERTIFIED; experienced traumatic surgeon; dependable individual with good training; seeks position or association. Box 9715 I, % AMA.

HOSPITALS, INSTITUTIONS AND COMMUNITIES seeking pathologists and pathologists seeking suitable locations will be listed and assisted as far as possible on written request to the College of American Pathologists, 203 E. Wabash Ave., Chicago 1, Illinois. I

SURGEON—AGE 36; DIPLOMATE OF AMERICAN Board of Surgery; FACS; chief surgeon of 85 bed general hospital, licensed Pennsylvania, North Carolina; desires association with surgeon, group, clinic or teaching institution preferably in East or South. Box 9653 I, % AMA.

RADIOLOGIST—BOARD ELIGIBLE IN DIAGNOSIS and therapy; seeks appointment in hospital, group or office where good radiology is practiced. Box 9651 I, % AMA.

ANESTHESIOLOGISTS—TWO; BOARD DIPLOMATE with 9 years experience as director of department and associate Board eligible; desire appointment to hospital or group of hospitals on fee for service basis. Box 9849 I, % AMA.

BUSINESS MANAGER—BS BUSINESS-CHEMISTRY; experienced in personnel work; married; desires position as administrator for clinic or group of doctors. Box 9830 I, % AMA.

GENERAL SURGEON—BOARD ELIGIBLE; DESIRES association with group, clinic or well-established surgeon; single; age 32; available July, 1950. Box 9624 I, % AMA.

RADIOLOGIST—32; DIPLOMATE; DIAGNOSIS AND therapy; seeks affiliation with hospital, group or partnership; 5 years training in teaching institutions; additional practical and administrative experience; immediate availability. Box 9753 I, % AMA.

OTOLARYNGOLOGIST — CERTIFIED; 36; EXPERIenced; seeking opportunity for private practice; in city of 20,000 to 50,000 which needs well qualified man; prefer East. Box 9892 I, % AMA.

MEDICAL ILLUSTRATOR — AVAILABLE IMMEDIately; trained also in medical photography. Medical Placement and Mailing Service, 760 Juniper Street, N.E., Atlanta, Georgia. I

SURGEON—PARTICULARLY WELL QUALIFIED IN cancer surgery; now director of tumor clinic, teaching hospital and instructor in surgery, university medical school. For further information, please write: Burneice Larson, Medical Bureau, Palmolive Building, Chicago. I

RESIDENT IN SURGERY — YOUNG PHYSICIAN; would like 1 to 3 years surgical residency; in large hospital approved for Board credit; available July 1st. Medical Placement and Mailing Service, 760 Juniper Street, N.E., Atlanta, Georgia. I

CERTIFIED OBSTETRICIAN-GYNECOLOGIST — 37; graduate Johns Hopkins Medical; training includes year internship, year medical residency, year obstetrical residency; 3½ years Army Medical Corps; 2 years obstetric-gynecology residency; 1 year associate obstetrician-gynecologist; past 1½ years obstetrical-gynecological residency. Woodward Medical Bureau, 185 North Wabash, Chicago. I

INTERNIST—DIPLOMATE, FACP; SINCE 1943 HAS held important faculty appointment, full time, department of medicine, university medical school and served as consultant to research and teaching organizations; qualified for deanship or chief of medicine, clinic or hospital. For further information, please write: Burneice Larson, Medical Bureau, Palmolive Building, Chicago. I

CERTIFIED PEDIATRICIAN — 38; GRADUATE Columbia University Medical; training includes 2 year internship, general practice 3 years; medical officer 4 years; pediatric resident 18 months; 6 months contagious diseases; private pediatric practice last 3 years. Woodward Medical Bureau, 185 North Wabash, Chicago. I

NEUROSURGEON—FORMAL TRAINING FOR WHICH he will receive MS in neurosurgery; years assistantship to American Board surgeon, general, before specializing. For further information, please write: Burneice Larson, Medical Bureau, Palmolive Building, Chicago. I

CERTIFIED SURGEON — 36; GRADUATE TEMPLE University Medical; training includes year rotating internship; general practice associate 2 years; Medical Corps 2 years; 3 year surgical residency university hospital; past 2 years chief, thoracic surgery section, large eastern hospital. Woodward Medical Bureau, 185 North Wabash, Chicago. I

WANTED—OPPORTUNITIES IN MEDICINE; AMONG our candidates are diplomates of American Boards qualified to head departments in medical schools, clinics, hospitals; others are interested in general practice, industry, administration or in further training. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. I

(Continued on next page)

$36.50

buys a time-proven Tycos* Aneroid

1. ALWAYS ACCURATE in any position!

2. YOU KNOW it's accurate as long as the pointer returns within zero!

3. POINTER OSCILLATES with each pulse beat, revealing any pulse irregularities!

4. SAVES PRECIOUS TIME! Zip open pocket case, circle Hook Cuff once around arm, and your Tycos is on!

5. 16 DIFFERENT adjustments on Hook Cuff to fit any size adult arm!

6. CAN'T BALLOON out at edges, throwing your readings out of whack!

7. MANOMETER CLIPS permanently on cuff, always ready for instant use! Minimizes accidental dropping.

8. TEN YEAR triple guarantee! That means we'll readjust your Tycos Aneroid free of charge even if you drop it! ("Readjust" does not include cost of broken parts.)

Leading the field since 1907

YES, for 42 years, Tycos Aneroid has meant the ultimate in convenient, accurate blood pressure readings. 42 years of scientific experience and know-how are packed into *your* Tycos Aneroid. Many Tycos Aneroids have given over a quarter-century of dependable service and are still going strong. On display at your surgical supply dealer's. Complete with exclusive Hook Cuff and pocket-size carrying case, *only $36.50.* Taylor Instrument Companies, Rochester, New York, and Toronto, Canada.

* Registered Trade Mark

TAYLOR *INSTRUMENTS MEAN ACCURACY FIRST*

(Continued from preceding page)

SCIENTISTS WANTED

WANTED — BIOCHEMIST; RESEARCH POSITION; project concerned with analysis of biochemical processes related to virus formation of host tissue; program well sponsored; well equipped research laboratories; university medical school, $70. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. K

BACTERIOLOGIST — FEMALE; EXPERIENCED; TO supervise laboratory in 150 bed hospital near Cincinnati; staff of 5; minimum $3000. (T-90) Woodward Medical Bureau, 185 North Wabash, Chicago. K

BIOCHEMIST — MASTERS DEGREE; EXPERIENCE; take charge biochemistry section of laboratory 200 bed hospital; middlewest state capital; 5½ day week; excellent salary. (T-1161) Woodward Medical Bureau, 185 North Wabash, Chicago. K

HEMATOLOGIST — EXPERIENCED; 125 BED APproved hospital; state capital, Rocky Mountain region; minimum salary $3600; 1 month vacation; 40 hour week. (T-57) Woodward Medical Bureau, 185 North Wabash, Chicago. K

PHARMACIST—CHIEF; 260 BED CALIFORNIA HOSpital; pharmacy recently rebuilt; equipment new and modern; 40 hour, 5 day week; $4800 yearly. (T-66) Woodward Medical Bureau, 185 North Wabash, Chicago. K

SEROLOGIST—JUNIOR SEROLOGIST; FOR HYGIENIC laboratory; health department; southwestern state capital and college town; 50,000 population; degree required; $250. (T-101) Woodward Medical Bureau, 185 North Wabash, Chicago. K

HISTOLOGIST—150 BED APPROVED GENERAL HOSpital; interesting locality vicinity; southwestern educational center; population 115,000; excellent salary and working conditions. (T-47) Woodward Medical Bureau, 185 North Wabash, Chicago. K

WANTED—SCIENTISTS, Ph.D's, AND CANDIDATES with lesser training; opportunities with teaching and research institutions, hospitals and industry; nation-wide service; negotiations strictly confidential. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. K

PROFESSIONAL AND TECHNICAL AIDES

WANTED—REGISTERED LABORATORY TECHNICIAN or one eligible for registration. St. Joseph Hospital, Lorain Ohio; 225 bed general hospital; salary open. L

WANTED—LABORATORY TECHNICIAN AND, ALSO, X-ray technician; former should be young man, registered, particularly well trained in bacteriology, advantageous if Master's Degree; X-ray technician should be registered; woman eligible; clinic and hospital appointments; California, $67. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. L

WANTED — TECHNICIAN; QUALIFIED IN X-RAY and laboratory work; laboratory of modern, well equipped hospital operated under American auspices; although tropical country temperature moderate; man preferred; $5400. $69. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. L

WANTED—CHEMISTRY TECHNICIAN WITH FORmal training in qualitative and quantitative analysis and histological technician trained in usual tissue work, preparation of microscopic sections, staining and filing of histological material; new completely equipped, air conditioned laboratories; university medical school; South. $69. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. L

BACTERIOLOGIST, CHEMISTS, LABORATORY technicians, X-ray technicians, physical therapists, occupational therapists, opportunities in all parts of the nation including countries outside Continental United States. Burneice Larson, Medical Bureau, Palmolive Building, Chicago. L

SHAY MEDICAL AGENCY
55 E. Washington Street
Chicago 2, Illinois

HEAD LABORATORY TECHNICIAN; Middle West; registered or eligible; duties: entire administration; well equipped laboratory; 200 bed hospital, fully approved; located in city of 31,000; excellent medical staff. $300 to start.

MEDICAL TECHNOLOGIST; West; registered; 100 bed hospital; located in beautiful mountainous resort area; ideal climate, many recreational facilities; $300-$350.

APPARATUS WANTED

WANTED—BRONCHOSCOPY INSTRUMENTS; BY young ENT man starting practice. Box 9075 M. % AMA.

HOSPITALS AND SANATORIA FOR SALE

MODERN HOSPITAL—FOR MENTAL CASES, ALcoholics, and drug addicts; located in the Ozark South in town of 30,000 on 9 acres of beautifully landscaped grounds; fully equipped, fully staffed, and operating at profit; owner is ill health. Box 9704 O. % AMA.

FOR SALE — COMBINATION HOSPITAL-CLINIC; Mid-West; 18 bed hospital; 3 bassinets; excellent general and surgical practice for 3 doctors; note over $25,000; will sell for $20,000; leasing to take a residency. Box 9057 O. % AMA.

FOR SALE—REASONABLE TERMS; EIGHT CONsider leasing; 17 bed hospital and clinic building; in Deer River, Minnesota; in heart of Itasca County fishing and hunting region; perfect location for 3 general practitioners who want to do a lot of general surgery. OB. etc; last year gross exceeded $60,000; each man should be able to get $12,000-$10,000 per annum if willing to work. Contact: A. L. Hjelmeland, MD. Address Deer River Clinic, Telephone 70. O

When you say

"Stop Smoking"

do your patients cooperate?

NOW you can safely recommend JOHN ALDEN Cigarettes, Pipe Tobacco and Cigars—for only by suggesting JOHN ALDEN are you absolutely assured that your patient's nicotine absorption will be a mere ONE-TENTH of that previously absorbed, (cigars slightly higher due to Havana wrapper and Broadleaf binder). *No other manufacturer can make this statement.*

JOHN ALDEN is not dependent upon so-called partial denicotinization for its unparalleled low-nicotine content.

"Type 31-V" tobacco, classified by the U. S. Department of Agriculture separate and apart from all others, was bred specifically for this purpose. JOHN ALDEN is the only brand using "Type 31-V" tobacco.

Free professional samples of cigarettes and cigars will be sent to you. Merely write "samples" on a prescription blank and mail to us.

JOHN ALDEN TOBACCO CO.
11 West 42nd Street, New York 18, N. Y.

(Books Received Continued)

OFFICE ORTHOPEDICS. By Lewis Cozen, M.D., F.A.C.S., Assistant Professor of Orthopedic Surgery, College of Medical Evangelists, Los Angeles. Cloth. $5. Pp. 232, with 156 illustrations. Lea & Febiger, 600 S. Washington Sq., Philadelphia 6, 1950.

THE PRINCIPLES AND PRACTICES OF REHABILITATION. By Henry H. Kessler, M.D., Ph.D., in Collaboration with Other Authors. Cloth. $9. Pp. 448, with 133 illustrations. Lea & Febiger, 600 S. Washington Sq., Philadelphia 6, 1950.

TRAITÉ DU PNEUMOTHORAX EXTRA-PLEURAL. Par P. Le Foyer et E. Delherq. Avec la collaboration de M. Berthean, et al. Paper. 2500 francs. Pp. 367, with 181 illustrations. Gaston Doin & Cie, 8, Place de l'Odéon, Paris 6e, 1950.

THE ALKALOIDS: CHEMISTRY AND PHYSIOLOGY. VOLUME I. Edited by R. H. F. Manske and H. L. Holmes. Cloth. $10. Pp. 525, with illustrations. Academic Press, Inc., Publishers, 125 E. 23rd St., New York 10, 1950.

BRONCHOGRAPHY. By Eelco Huizinga, M.D., and G. J. Smelt, M.D. Cloth. 39 florins. Pp. 270, with 146 illustrations. Van Gorcum & Comp. Ltd. (G. A. Hak & H. J. Prakke), Publishers, Assen, Netherlands, [1949].

SEVENTH SEMIANNUAL REPORT OF THE ATOMIC ENERGY COMMISSION, JANUARY 1950. United States Atomic Energy Commission. Paper. Pp. 228, with illustrations. Government Printing Office, Washington, D. C., 1950.

BABE IN A HOUSE. By Mollie Stevens Smart. Cloth. $2.75. Pp. 212, with Photographs by Louise and Bob Van der Meid. Charles Scribner's Sons, 597-599 5th Ave., New York 17; 23 Bedford Sq., London, W.C.1, 1950.

DIE TUBERKULOSE VOM STANDPUNKT DES INTERNISTEN. Von Prof. Dr. Hans Kutschera-Aichbergen. Paper. $5.70. Pp. 308, with 43 illustrations. Springer-Verlag, Mölkerbastei 5, Wien 1, 1949.

MIRIMIRE: ESTUDIO MÉDICO-SOCIAL DE UNA ZONA RURAL, "MUNICIPIO SAN FRANCISCO, ESTADO FALCÓN." Por Tulio Arends Wever. Paper. Pp. 131, with 28 illustrations. Editorial Bolivar, Caracas, 1949.

PROGRAMS FOR THE IMPROVEMENT OF RURAL HEALTH. Prepared by Committee on Rural Health, American Medical Association. Paper. Gratis. Pp. 227. A. M. A., 535 N. Dearborn St., Chicago 10, [n.d.].

LIST OF FELLOWS AND MEMBERS OF THE AMERICAN PSYCHIATRIC ASSOCIATION, 1949-1950. Paper. Pp. 384. American Psychiatric Association, Rm. 412, 1270 Ave. of The Americas, New York 20, [n.d.].

PATHOLOGIE DU NOUVEAU-NÉ. Par Jean Balmès et André Lévy. Préface du professeur Robert Debré. Paper. 900 francs. Pp. 316. Gaston Doin & Cie, 8, Place de l'Odéon, Paris 6e, 1950.

THE WRITER AND PSYCHOANALYSIS. By Edmund Bergler, M.D. Cloth. $3.50. Pp. 265. Doubleday & Company, Inc., Garden City, New York; 14 W. 49th St., New York 20, 1950.

UROLOGIC ROENTGENOLOGY. By Miley B. Wesson, M.D. Third edition. Cloth. $7.50. Pp. 282, with 284 illustrations. Lea & Febiger, 600 S. Washington Sq., Philadelphia 6, 1950.

WESTERN AUSTRALIA, REPORT OF THE COMMISSIONER OF PUBLIC HEALTH FOR THE YEAR 1948. Paper. Pp. 77, with illustrations. W. H. Wyatt, Government Printer, Perth, 1949.

LOUIS PASTEUR, FREE LANCE OF SCIENCE. By Rene J. Dubos. Cloth. $5. Pp. 418, with illustrations. Little, Brown and Company, 34 Beacon St., Boston 6, 1950.

PRINCIPLES OF PSYCHODYNAMICS. By Eduardo Weiss, M.D. Cloth. $4. Pp. 268. Grune & Stratton, Inc., 381 Fourth Ave., New York 16, 1950.

AMERICAN HEART ASSOCIATION ANNUAL REPORT 1949. Paper. Pp. 24. The Association, 1775 Broadway, New York 19, [n.d.].

ROYAL ACADEMY OF MEDICINE IN IRELAND REPORT OF SESSION 1948-1949. Paper. Pp. 18. Dublin, [n.d.].

V 1
195

PRACTICES FOR SALE

CALIFORNIA—EENT PRACTICE AND EQUIPMENT for sale, established 15 years; physician owner leaving. V. P. Flynn, MD, 625 Broadway, Bank of America Building, San Diego, California. P

CALIFORNIA—TOWN OF 7000; TWO HOURS FROM large metropolitan area; grossing $50,000 per annum; office newly equipped; X-ray, RMR, EKG, diathermy, laboratory; hospital facilities; office building, equipment and practice for fair price; exceptional opportunity; specializing. Box 9089 P, % AMA.

CALIFORNIA—FINE PRACTICE; MODERN EQUIPment including EKG, McKesson RMR, X-ray, new type diathermy, etc; town 2500, large drawing area; few night calls; 2 semi retired doctors; prefer middle aged man with capital to handle equipment. Box 9098 P, % AMA.

CONNECTICUT—ADJACENT TO NEW YORK; ON Long Island Sound; active general practice; well equipped office; will introduce; leaving to specialize. Box 9097 P, AMA.

CENTRAL ILLINOIS—RETIRING FROM PRACTICE; wish to dispose of practice and equipment; excellent opportunity; prosperous farm area; collections good; excellent hospital facilities near-by. Dr. H. O. Regier, Mason City, Illinois. P

CHICAGO, WEST SIDE, ILLINOIS—INDUSTRIAL practice; established over 25 years; doctor retiring. Box 9089 P, % AMA.

ILLINOIS—UNOPPOSED RURAL PRACTICE; OFFICE and equipment; Sumrall, Illinois; excellent hospital facilities; will introduce; leaving for residency. Box 9760 P, % AMA.

CENTRAL ILLINOIS—OUTSTANDING OPPORTUNITY for young general practitioner; in wealthy agricultural center; hospital 1 mile; includes new 7 room modern office. Write: Box 527, Tolono, Illinois. Phone 21. P

CENTRAL ILLINOIS—LARGE COUNTRY PRACtice; very good hospitals; grossing nearly $30,000 a year; 4 lucrative years of years time; good adjoining office building; fully equipped; available 1st of September; terms may be arranged. Box 9047 P, % AMA.

CENTRAL ILLINOIS—MUST SEE TO APPRECIATE; home-office combination; 20 miles from 4 hospital affiliations; very prosperous area; owner specializing. Unassigned lease with Dr. G. W. Wolever, Elks Club, Springfield, Illinois. P

INDIANA—CENTRAL; UNOPPOSED RURAL PRACtice; in town of 800 population; 30 miles north of Indianapolis; excellent farming community; good hospitals nearby; has office combination. Box 9102 P, % AMA.

DETROIT, MICHIGAN—NORTHWEST; UNUSUAL opportunity for qualified man; exclusive residential section; internal medicine, allergy; must be reputable; going to large hospitals; leaving state; terms. Box 9100 P, % AMA.

CENTRAL MINNESOTA—GENERAL PRACTICE AND office equipment; population 9000; open staff hospital; will introduce; moderate; reason for selling, retiring; available about September 1st. Box 9055 P, % AMA.

SOUTHERN NEW JERSEY—11 ROOM AIR CONDItioned clinic; suitable 1 or 2 doctors; 1st floor, 2 apartments above; $12,000 in 1st month. X-ray, RMR, EKG, ultra-violet, 4 diathermies, etc; population 20,000; open 110 bed hospital; gross $40,000-$50,000 annually; price $65,000; $15,000 will handle; will stay until April, 1951 to introduce; specializing. Box 9720 P, % AMA.

NORTHERN NEW JERSEY—BEAUTIFUL TOWN 25,000; 30 minutes New York City; 2 miles George Washington bridge; industrial building 5 room office with new equipment; suitable general practitioner or specialist; active practice; apartment available. Box 9407 P, % AMA.

NEW JERSEY—NEAR NEWARK; LARGE GENeral and surgical practice; established 15 years; beautiful laundry brick home and office; complete equipment; on large corner lot; leaving state. Box 9084 P, % AMA.

BROOKLYN, NEW YORK—LONG ESTABLISHED, lucrative practice; rapidly growing section; fully equipped 3 room office; separate entrance; beautiful 4 room residence above office; newly decorated. Box 9077 P, % AMA.

NEW YORK—LARGE GENERAL PRACTICE WITH considerable obstetrics; owner leaving immediately for emergency practice; office and home for sale or rent. Dr. L. A. Gutner, 70 North Main Street, Canandaigua, New York.

NEW YORK—GENERAL PRACTICE FOR SALE; OB office and equipment for rent with introduction to patients; grossing $20,000 yearly; specializing July, 1950. Box 9080 P, % AMA.

NEW YORK—WESTCHESTER COUNTY; LARGE beautiful home-office combination; established 20 years; by qualified internist; excellent opportunity to take over successful practice immediately; moving because of health. Box 9774 P, % AMA.

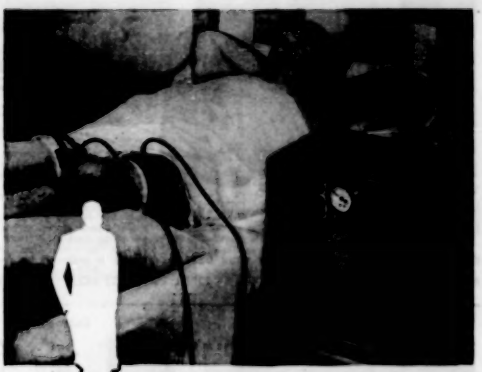
PIEDMONT, SOUTH CAROLINA—EENT PRACtice; well established; well equipped, limited office; prosperous county seat; unopposed; ideal for semi-retirement; beautiful new 7-room country home available; retiring. Box 9015 P, % AMA.

KERSHAW, SOUTH CAROLINA—GENERAL PRACtice; office furnished and equipped for general practice; buyer should gross $15,000 1st year and can pay for practice from proceeds. Contact: J. W. Wideman, MD, The McLeod Infirmary, Florence, South Carolina. P

SOUTH DAKOTA—OPHTHALMOLOGY PRACtice; in upper midwestern town of 22,000; established 10 years; completely equipped hospital consultation available; 1949 gross $47,345; completely equipped office and 44-bed well kept rooming; good supply of referral work from 70 to 300 mile radius; work only by appointment. Box 9086 P, % AMA.

NORTHEASTERN WISCONSIN—FOR SALE IMMEDIately; large practice; town of 1300; 3 hospitals 15 miles away; 4 room office with X-ray and diathermy; 4 bedroom home available. Box 9048 P, % AMA.

(Continued on next page)



Subjective . . . RELIEF

Objective . . . BENEFIT

in VASCULAR THERAPY

In the management of peripheral vascular disease, the subjective response to rhythmic constriction — relief of pain, reduction of claudication, and return of warmth to the skin — runs parallel to increased vascularity as evidenced by improved oscillometric curves.

The technic is simple — so simple that treatment may be administered during sleep and without an attendant. A Rhythmic Constrictor may be prescribed for use in the home as well as in the hospital.

Write for abstract of a recent article.

PRESCRIBE A

Burdick

RHYTHMIC CONSTRICTOR

Burdick

THE BURDICK CORPORATION

MILTON, WISCONSIN

"OPH-FLAP"© HYGEIA BAG ALL THESE FEATURES

1. Solid Leather, Natural Grain. 2. Two End Pockets
3. Sanitary Rubber Lined Throughout. 4. Deep Side Handles
5. Outside Card Holder. 6. Solid Brass Zipper & Lock
7. Full Length Side Pocket with Adjustable Loops
No. 510 Size (Inches)—$20.00 No. 510 Size 17x9x7—$30.00
Both sizes made in Army Russet or Black
SEND FOR BROCHURE AND NAME OF YOUR DEALER

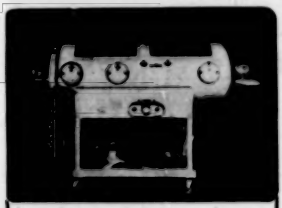
A DISTINGUISHED BAG WITH *Distinguishing* **FEATURES** *for the Physician*

"OPH-FLAP"© HYGEIA MEDICAL BAG

...it holds ½ more!

Here is a bag physicians have found both practical in use and distinguished in appearance. The unique patented "OPH-FLAP"© feature allows the bag to be opened to full length and width of the top, allowing ½ more space for packing. It is the only medical bag that can be packed to the very top and still expand closed without crushing or jamming the contents. Made of fine top grain leather by craftsmen, the "OPH-FLAP"© Hygeia is preferred by doctors everywhere.

NATHAN PRODUCTS CORP. • 2155A PROSPECT AVE. • NEW YORK 57, N.Y.



DRINKER-COLLINS
DUPLEX
RESPIRATORS
DOUBLE
PROTECTION

When two lives depend on one iron lung the duplex feature is priceless. It has saved lives until a second respirator could be obtained. You might as well have this double protection for it costs no more — and it may save extra lives for you later.

A "POLIO" REPRINT

By Dr. Harold E. West and Dr. Albert C. Bever entitled "Treatment of Poliomyelitis Involving the Respiratory System" will be sent you without charge or obligation.

WARREN E. COLLINS, INC.
555 Huntington Avenue
Boston 15, Mass.

Please send me the above reprint and information on the latest Drinker-Collins Duplex Respirator.

Signed _____
St _____
City _____ Zone _____ State _____

Introducing
Terminal Sterilization FOR HOME USE
THE NEW *Lactum* FORMULA &
STERILIZER Outfit

Sterilizes formula, bottles, nipples, caps, stirrer—ALL IN ONE OPERATION. Sealed formula. Nipple UNTOUCHED in removal of feeding. JUST LIFT SHIELD AND USE ELECTRIC & HOT-ELECTRIC Accommodates all standard nursers
*Patents by Am. Acad. Ped. & Am. Hosp. Assn.

AVAILABLE TO DOCTORS

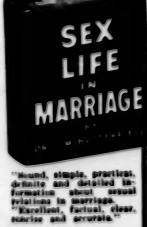
New Paper on "Terminal Sterilization of Infant Formula in the Home." Send for your copy.

SANIT-ALL PRODUCTS CORP.
GREENWICH, OHIO

MAKERS OF
Fine Cosmetics

Quality of Ingredients and Suitability of Selections are two factors underlying the preparation of Cosmetics by Luzier.

If you have any cosmetic problems our sales organization will be happy to serve you.
LUZIER'S Inc. • Kansas City, Mo.



"Sound, simple, practical, definite and detailed information about sexual relations in marriage. . . . "Excellent, factual, clear, concise and accurate."

"Best Manual to give." —Ohio State Medical Journal

Price $2, incl. postage
5-day Money-back Guarantee.

EMERSON BOOKS, Inc.
Dept. 840-F, 251W. 19 St.
New York 11

Part of Contents

The Sexual Impulse
The Orgasm of Sex
Pre-Marital Physical Examination
Advice to Honeymooners
The First Sex Act
Frequency of Intercourse
Positions in Sex Intercourse (with roundels)
Technique of the Sex Act
Impotence and Frigidity
Sexual Maladjustments
Premature Orgasm
Sexual Handicaps
Sex Foreplay and Afterplay
Sex Stimulation
Masturbation

SEX CHARTS

Male and female sex anatomy explained with complete set of excellent illustrations.

(Continued from preceding page)

MILWAUKEE, WISCONSIN—WONDERFUL OPPORTUNITY; excellent well established general practice; available immediately; leaving city for Illinois health center. Annual receipts 1949, $35,000-$39,000 1st year; lease available; 5 large rooms, 200 square feet space; 100 sq. ft. x-ray; 3 examining tables; short wave; ultra violet; 1075 rad; EKG; basal and refrigerator for biologicals; will introduce. Box 9074 F, % AMA. G

WISCONSIN—ENT PRACTICE; PROSPEROUS MIDwestern city 50,000; located in beautiful scenic area with rich dairy lands; excellent schools, colleges and 4 hospitals; also many industrial plants; established 25 years; wonderful opportunity for young man; reasonably priced on easy terms; wish to retire on account of health. Box 9053 F, % AMA. G

APPARATUS ETC. FOR SALE

FLUOROSCOPES—FROM $195; MEDICAL MICROscopes, new and used, bargains; new shockproof X-rays and fluoroscopes from $795; fluoroscopic chairtables from $350; new and used other equipment bargains; many other items; liberal terms. Sears X-ray Medical Equipment Co., 1303 Jerome Ave. Bronx, New York. FOrdham 7-7500. G

LARGE STOCK OF NEW AND USED EQUIPment and instruments; always on hand for the physician, industrial laboratory. Harry Wolin, 402 East 59th St., New York 22. New York. G

SPENCER STUDENT MICROSCOPE—$195; HOSPITAL electric autoclave 16 x 36, $595; Brown-Boerger cystoscope, 18fr. $100; Cambridge EKG, $275; new 2 pan electric centrifuge, $25. Write: Atlas Surgical, 178 2nd Ave., New York 3. New York. G

FOR SALE — RECONDITIONED X-RAY; ELECtromedical and electrocardiograph equipment; available at all district offices in United States and Canada; prices include installation and operating instructions by factory-trained engineers. Write: PER-TEL SX X-Ray Corp., 4855 Electric Avenue, Milwaukee 14, Wisconsin. G

LIEBERSON ELECTRO SHOCK APPARATUS—OFFice model; type T35A; excellent condition; originally cost $325; 1 year old; sell $170; cash, COD, or cashiers check in advance. W. L. Sharp, MD, Anderson, Indiana. G

MICROSCOPES, SHORT WAVES, ULTRAVIOLET lamps, cystoscopes, resectoscopes, X-ray collators, urological instruments and accessories, sterilizers, suction pumps, office and hospital room furniture, X-rays and accessories. Adelphi Surgical Co., 132 Fulton St., Brooklyn, New York. G

MISCELLANEOUS FOR SALE

FOR SALE—AMA JOURNALS 1883-1937; 100 VOLumes bound. Box 9731 B, % AMA. G

FOR RENT

DOCTORS OFFICE—FOR RENT, ON STREET LEVEL; spacious; ideal location; in building with modern pharmacy and 5 other medical men; located 3 blocks from hospital with a population of 50,000. If interested please write: 367 Western Ave., Western Ave. Pharmacy, Inc. or phone 3-3012, Joliet, Illinois. T

OFFICE FOR RENT — ESTABLISHED PRACTICE; doctor ill; can take over immediately. For full information write or telephone: Mrs. Benjamin Gidding, 3060 Pacific Avenue, Wildwood, New Jersey. T

MEDICAL OFFICE—FOR RENT WITH OR WITHOUT equipment; share waiting room with 2 dentists; excellent location in Plainfield, New Jersey. Box 9084 T, % AMA. T

AMBULANT PROCTOLOGIST'S LOCATION—ESTABlished 19 years; in Texas' largest city. Box 9307 T, % AMA. T

RENT OR SALE—28 BED LICENSED CONVALEScent home; on 3 acre land; in southern Connecticut; excellent retirement income or small down payment with monthly installments from income; details by writing Box 179, Wallingford, Connecticut. T

THREE ROOM OFFICE—IDEAL FOR DOCTOR; centrally located; Riverplace, Canada $75; this fast growing town has need for another doctor. Address reply: Louis, 35 Eldridge Rd., New Britain, Connecticut. T

BROOKLYN, NY—FOR RENT OR SALE; EAR, NOSE, throat office with new modern complete equipment; due to doctors sudden death. Mrs. Rice, 2511 Beverly Road, Brooklyn, New York. Telephone INgersol 2-3640 after 5 o'clock. T

FULLY EQUIPPED OFFICES OF RECENTLY DEceased physician and surgeon for rent; state age, race and qualifications. Write: Mrs. J. H. Acton, 314 E Main Street, Endicott, New York. T

UNIQUE OFFER—FOR LEASE ON PERCENTAGE basis; to competent physician or group with California license; long established fully equipped clinic; in ideal location. Box 9715 T, % AMA. T

MEDICAL WRITING

MEDICAL WRITING—BIBLIOGRAPHIES, EDITING, abstracting, ghost-writing; long experience; excellent references; satisfaction guaranteed. F. A. Cooksley, Box 634, Washington 4, District of Columbia.

RADIUM

WILL BUY OLD RADIUM—IN ANY TYPE CONtainer. Make offer to: Luminous Industries, Inc., 42 West 16th Street, New York 11, New York.

ELECTROLYSIS

SUPERFLUOUS HAIR REMOVED PERMANENTLY— specializing in difficult cases; no case too small, no case too far advanced; painless, free consultations by appointments only. Lucille Bouchard, Licensed Electrologist, 1030 Park Avenue, New York 28, New York. RE 7-7930.

Eternal Vigilance

THIRSTY OR NOT...

Enjoy

. . . is our responsibility to the millions of people who enjoy Grapette. Conscientious laboratory control over both concentrate and finished product safeguards their health, guarantees their enjoyment.

THE GRAPETTE COMPANY, INC.
CANTON, GEORGIA

FREE TO PHYSICIANS...

New Low-Sodium Reducing Diets

A supply of sodium-restricted, 1000-calorie diets free of advertising and made to look as if they were typed in your office will be sent to you on your request.

The value of sodium-restricted diets in congestive heart failure, high blood pressure, and certain forms of renal disease has been established by numerous clinical studies. In patients requiring a reduction of weight with a sodium-restricted diet, specification of DIETENE® provides a truly palatable means of accomplishing the desired result *without sacrificing nutritional adequacy, or jeopardizing the low-sodium regimen.*

DIETENE is an excellent low-calorie source of biologically superior proteins plus protective amounts of essential vitamins and minerals.

SUPPLIED: In 15-oz. cans, plain or chocolate flavor, available through all pharmacies at $1.55. PATIENTS ENJOY TAKING DIETENE.

SEND FOR YOUR FREE SUPPLY OF 1000-CALORIE, LOW-SODIUM DIETS TODAY BY MAILING THE ATTACHED COUPON.

Not advertised to the laity

DA-70

THE DIETENE COMPANY
518 FIFTH AVENUE SOUTH, MINNEAPOLIS 15, MINNESOTA

Please send me a free supply of the new 1000-calorie DIETENE Reducing Diet, providing only 0.7 to 1 Gm. of sodium per day.

Name.....**M.D.**
(Please Print)

Address.....

City.....**Zone**.....**State**.....

MILWAUKEE SANITARIUM

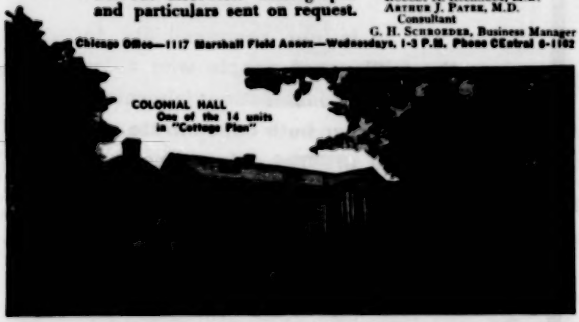
WAUWATOSA
WISCONSIN

Maintaining the highest standards for more than a half century this Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars sent on request.

JOSEF A. KINDWALL, M.D.
CARROLL W. OSGOOD, M.D.
WILLIAM T. KRADWELL, M.D.
BENJAMIN A. RUSKIN, M.D.
LEWIS DANZIGER, M.D.
RUSSELL C. MORRISON, M.D.
JAMES L. BARRE, M.D.
ROBERT A. RICHARDS, M.D.
ARTHUR J. PAYNE, M.D.
Consultant

G. H. SCHROEDER, Business Manager

Chicago Office—1117 Marshall Field Annex—Wednesdays, 1-3 P.M. Phone CEntral 6-1102



COLONIAL HALL
One of the 14 units in "Cottage Plan"

APPALACHIAN HALL

ASHEVILLE NORTH CAROLINA

As institution for rest, convalescence, the diagnosis and treatment of nervous and mental disorders, alcohol and drug habituation.

Appalachian Hall is located in Asheville, N. C. Asheville justly claims an unexcelled all year round climate for health and comfort. All natural curative agents are used such as physiotherapy, occupational therapy, shock therapy, outdoor sports, horseback riding, etc. Five beautiful golf courses are available to patients. Ample facilities for classification of patients. Rooms single or en suite with every comfort and convenience.

For rates and further information, write
Appalachian Hall, Asheville, N. C.

WM. RAY GRIFFIN, M.D. W. A. GRIFFIN, M.D.

DESIRABLE ASSISTANTS

for your institution
can be contacted thru

A Classified Advertisement

in THE JOURNAL

CHARLES B. TOWNS HOSPITAL *Established 1901*

FOR THE TREATMENT OF ALCOHOLISM
NARCOTIC AND BARBITURATE
ADDICTIONS EXCLUSIVELY

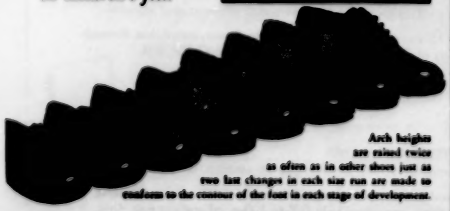
Complete Medical & Psychiatric Treatment at predetermined cost
Privacy of patient is assured—if desired

Literature on Request
Wm. D. Silkworth, Medical Director Edward B. Towns, Director
293 Central Park West, New York 24, N. Y. SChuyler 4-0770
Member American Hospital Association

NATURE *takes time*

to completely develop the bone structure in children's feet.

Pro·tek·tiv



Arch heights are raised twice as often as in other shoes just as two last changes in each size run are made to conform to the contour of the foot in each stage of development.

Write today for illustrated information

Curtis·Stephens·Embry Co., Inc.

READING, PENNSYLVANIA

PRESCOTT'S CLIMATE IS Famed FOR RELIEF of ASTHMA IN CHILDREN

Most patients suffering from **ASTHMA, Hay Fever and Other Allergic Affections**

find in Prescott, Arizona, a combination of climate and living conditions highly conducive to relief.

WRITE for information—living costs and accommodations in Prescott. Address:

Chamber of Commerce Prescott, Arizona

ARCHIVES OF INTERNAL MEDICINE The nature of disease, new approaches to treatment and diagnosis in general or special practice. This journal offers a constantly expanding library of practical examination. $10.00 YEARLY. CANADA, $10.40. FOREIGN, $11.00.

OTHER A. M. A. SPECIAL JOURNALS — For Every Physician

	Yearly
Archives of Surgery	$14.00
Archives of Dermatology and Syphilology	12.00
American Journal of Diseases of Children	12.00
Archives of Otolaryngology	12.00
Archives of Ophthalmology	12.00
Archives of Neurology and Psychiatry	12.00
Archives of Pathology	8.00
Archives of Industrial Hygiene & Occupational Medicine	8.00

AMERICAN MEDICAL ASSOCIATION, 535 N. Dearborn St., Chicago 10

The New York Polyclinic

MEDICAL SCHOOL AND HOSPITAL (Organized 1881)

(The Pioneer Post-Graduate Medical Institution in America)

EYE, EAR, NOSE AND THROAT

A combined full time course covering an academic year (9 months). It consists of attendance at clinics, witnessing operations, lectures, demonstration of cases and cadaver demonstrations; operative eye, ear, nose and throat (cadaver); head and neck dissection (cadaver); clinical and cadaver demonstrations in bronchoscopy, laryngeal surgery and surgery for facial palsy; refraction; radiology; pathology, bacteriology and embryology; physiology; neuro-anatomy; anesthesia; physical medicine; allergy; examination of patients pre-operatively and follow-up post-operatively in the wards and clinics. Also refresher courses (3 months).

For the GENERAL PRACTITIONER

Intensive full time instruction in those subjects which are of particular interest to the physician in general practice, consisting of clinics, lectures and demonstrations in the following departments—medicine, pediatrics, cardiology, arthritis, chest diseases, gastroenterology, diabetes, allergy, dermatology, neurology, minor surgery, clinical gynecology, proctology, peripheral vascular diseases, fractures, urology, otolaryngology, pathology, radiology. The class is expected to attend departmental and general conferences.

For information address **MEDICAL EXECUTIVE OFFICER: 345 West 50th St., NEW YORK 19**

SECLUSION Est. 1900 ***MATERNITY***

FAIRMOUNT HOSPITAL

For Unmarried Girls

Rates reasonable, in certain cases work given to reduce expenses.

Fireproof Bldg.

Private sanitarium with certified obstetrics in charge. All adoptions arranged through juvenile court. Early entrance advised

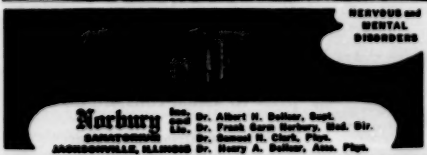
Write for Information

MRS. EVA THOMSON
1414 E. 27th St.
Kansas City, Mo.

Las Encinas SANITARIUM

INTERNAL MEDICINE
NERVOUS DISORDERS

C. W. Thompson, M.D., F.A.C.P., Director



NERVOUS and MENTAL DISORDERS

Narbury Inc. 1942

SANATORIUM
JACKSONVILLE, ILLINOIS

Dr. Albert N. Bellue, Supt.
Dr. Frank Gore Narbury, Med. Dir.
Dr. Samuel H. Clark, Phys.
Dr. Henry A. Bellue, Asso. Phys.

BELLEVUE PLACE

for

Nervous and Mental Diseases

EDWARD ROSS, M. D., Medical Director

BATAVIA, ILLINOIS PHONE: BATAVIA 1550

MODERN—WELL EQUIPPED—QUIET
Established 1934

ALCOHOLISM, DRUG ADDICTION, NERVOUS-MENTAL DISEASES

Alcoholic treatment one of Gradual Reduction, craving for intoxicants destroyed, Mental separated from nervous, absolute privacy, comfortable well appointed ladies' and men's lounge. Drug treatment one of Gradual Reduction, no Withdrawal pains, no rapid withdrawal methods. Nervous patients accepted for observation, diagnosis and treatment. Mental cases have every comfort that their own home affords. Selected cattle cases. Rates and Folder on request. Address E. W. Stokes, M.D., Medical Director. (Telephone Highland 2101-2102.)

923 Cherokee Road, Louisville, Ky. THE STOKES SANITARIUM

The Willows Maternity Sanitarium, Inc.

Est. 1905

Superior services for expectant unmarried mothers. Patients accepted any time. Early entrance advised. All adoptions arranged through the Juvenile Court. Rates reasonable and adapted to patient's needs.

WRITE FOR CATALOG

2027 Wade Street, Kansas City 8, Missouri

THE CHICAGO MEDICAL SOCIETY

Announces Post Graduate Courses To Be Held in Chicago

DISEASES OF THE GASTRO-INTESTINAL TRACT, LIVER AND PANCREAS

October 23-27, 1950

FACULTY

Walter C. Alvarez
Clifford J. Barborka
Granville A. Bennett
Russell S. Boles
Richard B. Capps
Thomas G. Duncan
Lester R. Dragstedt
Robert Elman
George B. Enterman
John H. Fitzpatrick
Edmund F. Foley
Warren W. Furey
Paul H. Holinger
Andrew C. Ivy
Sara M. Jordan
Robert W. Keeton
Joseph B. Kirsner
Grant H. Laing
Walter G. Maddock
John T. Reynolds
Leon Schiff
Nancy P. Slaughter
Lowell S. Snorf
Albert VanderVeer
Arkell M. Vaughn
John M. Waugh
Stewart Wolf

DISEASES OF THE HEART, KIDNEY AND BLOOD VESSELS

October 30-November 3, 1950

FACULTY

William E. Adams
Wright Adams
Ernest E. Bay
Claude S. Beck
William H. Bess
Howard B. Burchell
Sam deTakats
Albert Dorfman
A. Carlton Ernstene
G. E. Fean
Fred W. Fitz
Peter H. Fordham
Smith Freeman
Stanley Gibson
H. G. Gilbert
Morris J. Hechtel
Ford K. Hick
Edgar A. Hines, Jr.
Louis N. Katz
Martha A. Kline
William B. Kountz
George V. Lolley
Robert L. Levy
Gilbert H. Marquardt
Francis D. Murphy
William Parson
Ogilvie Paul
Willis J. Potts
Harris B. Shumacker, Jr.
Lolley H. Sloan
Howard B. Sprague
Eugene A. Stead, Jr.
William B. Wartman
Irving S. Wright

LECTURES, ROUND TABLES, CLINICAL PATHOLOGICAL CONFERENCES, PRESENTATION OF PATIENTS

Both Courses Open to Physicians in Good Standing in Their Local Medical Societies. Fee $50.00 each Course.

For copy of program and application write

Dr. Willard O. Thompson, Chairman, Committee on P. G. Education, Chicago Medical Society, 30 N. Michigan Ave., Chicago 2.

MICHAEL REESE HOSPITAL POSTGRADUATE SCHOOL

ONCE-A-WEEK COURSES FOR CHICAGO AREA

PATHOLOGIC DIAGNOSIS
Sept. 6 to Oct. 11, 1950
Wednesday afternoons, 1-4 P.M. Tuition: $50.00

GYNECOLOGY AND SURGERY FOR THE GENERAL PRACTITIONER
Oct. 4, 1950 to March 28, 1951
Wednesday mornings, 9-12 Noon Tuition: $150.00

APPLICATION OF PHYSIOLOGY AND BIOCHEMISTRY TO MEDICINE
Oct. 4, 1950 to March 28, 1951
Wednesday afternoons, 1-4 P.M. Tuition: $150.00

RECENT ADVANCES IN DISEASES OF THE CHEST
Oct. 18 to Dec. 20, 1950
Wednesday evenings, 7-9 P.M. Tuition: $50.00

SIZE OF CLASSES LIMITED. For further information address: Dr. Samuel Soskin, Dean, 29th St. & Ellis Ave., Chicago 16, Ill.

How Pet Milk Helps in Your Fight Against Disease

What is more important to the newborn infant than clean, safe food? Is not this your first concern when choosing a milk for your infant patients?

When you use Pet Evaporated Milk for infant formula, you are assured of a completely safe formula, as if there were no germs of disease in the world. Pet Milk is heat-sterilized in its sealed container, protected permanently from any source of contamination prior to actual consumption.

You are assured, too, that safe Pet Milk retains all of the food values that the best of milk can be depended upon to supply, and that these food values are uniform wherever and whenever Pet Milk is purchased.

Try Pet Milk for the babies in your care! Let this safe low-cost milk help you in your continuous fight against disease.

Favored For Infant Formula

PET MILK COMPANY
1438-G Arcade Building
St. Louis 1, Missouri

Abstract from Gastroenterology
Vol. 13, No. 4, October 1949

A METHOD OF IMPROVING FUNCTION OF THE BOWEL

J. ARNOLD BARGEN, M. D.,
Division of Medicine, Mayo Clinic, Rochester, Minnesota

Constipation, probably the commonest of physical complaints, may be caused by several factors, singly or combined: *1.* nervous fatigue and nervous tension; *2.* improper intake of fluid; *3.* improper dietary habits; *4.* failure to heed the call to stool; *5.* lack of exercise, and *6.* excessive use of laxatives.

It would seem logical that correction of constipation lies in the suitable adjustment of these factors.

Any diet for relief of constipation must supply material which has limited absorption in the small intestines and which adds bulk in the colon, i.e. fruits and vegetables. Daily fluid intake, from 2.5 to 3.5 liters, is highly important. Since many people find it difficult to eat enough dietary bulk, the trend recently has been toward hydrophilous colloids.

A search was made for such a colloid, for oral use, which has little or no effect in the stomach and small intestines. Methylcellulose, appropriately prepared as Cellothyl tablets, seems to answer these criteria.

A large number of patients received 4 tablets every 4 hours, with subsequent relief of constipation. These patients had no ordinary form of constipation; they had taken quantities, or as some said, "barrels of laxatives." In the following cases of obstinate constipation of long duration, a striking change for the better followed the use of this preparation, as part of a program of general medical care:

RESULTS OF TREATMENT

Case 1. Woman, age 57.—Obstinate constipation since early childhood. *After treatment:* Complete relief. She continued to pass normal, soft formed stools.

Case 2. Nun, age 69. — Obstinate constipation of lifelong duration. *After treatment:* In about a week . . . soft stools.

Case 3. Man, age 44.—Constipated many years; severe diabetes. *After treatment:* Normal stools at the end of one week.

Case 4. Woman, age 62. — Very difficult evacuation after carcinoma removal. *After treatment:* She passed her stools without discomfort.

Case 5. Woman, age 19. — Obstinate constipation; she had taken a laxative almost daily since early childhood. *After treatment:* At the end of two weeks she was passing stools daily.

COMMENT

Function of the bowel can be greatly improved by the addition of methylcellulose, appropriately prepared (Cellothyl). It represents a valuable addition to the well-ordered program of medical care.

In a matter of days
correct years
of constipation

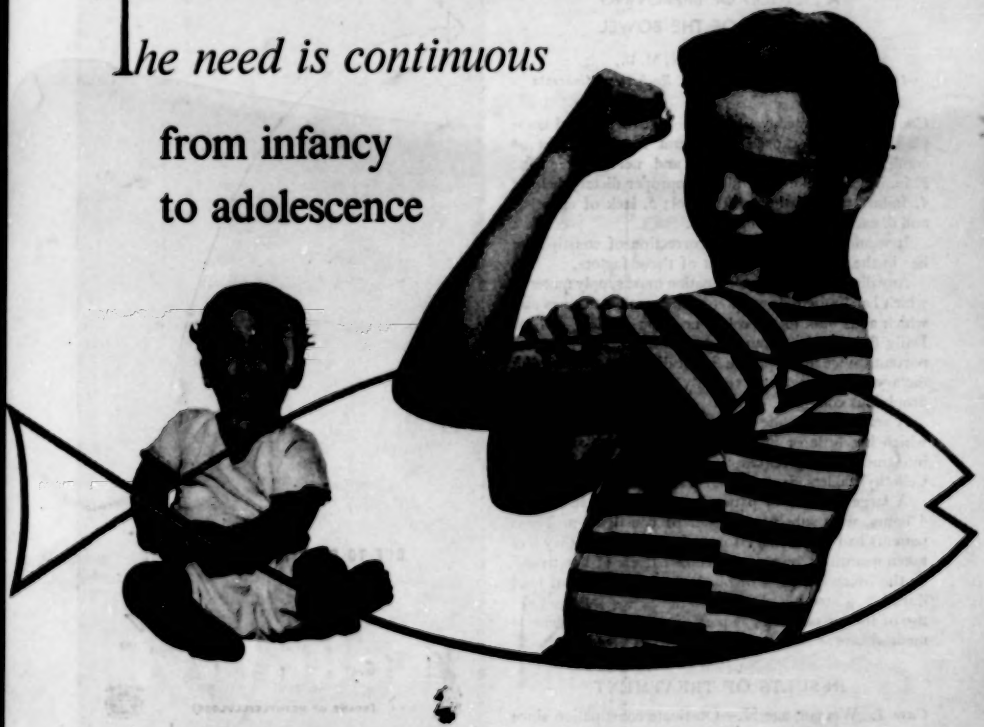
with

Cellothyl

CHILCOTT

The need is continuous

from infancy to adolescence



While careful supervision is commonly maintained over the feeding of infants, in far too many cases the nutrition of older children escapes the doctor's supervision. Dietary surveys of older children show a high incidence of malnutrition.

Mead's Oleum Percomorphum With Other Fish Liver Oils and Viosterol is a reliable, convenient product for providing vitamin D in addition to vitamin A. The vitamin D exercises a favorable influence on calcium and phosphorus metabolism, plays an important role in tooth formation, and, in some instances, aids in preventing and arresting dental caries.

With the possible exception of the middle of the first year, the need for vitamin D is probably greater during adolescence than at any other time.

OLEUM PERCOMORPHUM

DROPPER BOTTLES—10 cc. and 50 cc. (60,000 units vitamin A and 8,500 units vitamin D per gram).

CAPSULES—Bottles of 50 and 250 capsules (5,000 units vitamin A and 700 units vitamin D per capsule).

SPECIFY MEADS

MEAD JOHNSON & CO.
EVANSVILLE 21, IND., U.S.A.